THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.--*Washington.*

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PREMIUMS AWARDED BY THE AMERICAN INSTIUTE, at their Fifteenth Annual Fair, held at the corner of Broadway and Fourteenth street, 19th and 20th October, 1842.

IMPROVED BREEDS OF CATTLE.

Bulls, 2 years old and upwards.

To E. P. Prentice, Albany, for best bull, Fairfax—Silver Cup.

Henry Watson, Conn. 2d do. Prince Hal—Silv. medal.

Bulls, 1 year old and upwards.

To Thomas Addis Emmet, N. York, best bull, Sir Temple—Silver Cup.

S. W. West, do. 2d do. Prince of Fulton—Silv. medal.

Bull Calves.

To E. P. Prentice, Albany, best calf, Cato—Silver Cup.

Wm. Gibbons, N. Jersey, 2d do. Avalon—Silv. medal.

Cows, 3 years old and upwards.

E P Prentice, Albany, best cow, Matilda—Silver cup.

Do do 2d do Daisy—Silver medal.

Heifers, 1 year old and upwards.

To J A Pool, N. J. best heifer, Alderney—Sil. cup.

Do. do. 2d do. Louisa—Silv. medal.

Heifer Calves.

To Effingham Lawrence, Flushing, L. I. best calf, Sally—Silver cup.

W Pirnie, Westchester Co. 2d do. Victoria—Silv. medal.

Extra Stock.

To Cyrus P. Smith, Brooklyn, for his imported Durham Cow, possessing extraordinary milking qualities—Silver medal.

NATIVE STOCK—*Bulls, 2 years old and upwards.*

To Jas. Ramsey, Brooklyn, best bull—Silver Cup.

Bull Calves.

B. Brockett, Connecticut, bull calf—Silver medal.

Cows 3 years old and upwards.

Angus McDuffy, Sing Sing, best cow—Silver cup.

Josiah Pirnie, Rye, 2d do.—Silver medal.

George D. Small, Newark, N. J. 3d do.—Diploma.

Working Oxen.

J Todd, North Haven, Conn. best pair—Silver cup.

John B. Davis, Derby, do. 2d do.—Silver cup.

John Hubbard, Guilford, do. 3d do.—Silver cup.

Do. do. do. a pair of fine steers—Silv. medal.

W. K. Townsend, East Haven, do. a pair 3 year old working bulls—Silver medal.

Fat Cattle.

Davis, Roseman & Co. N Y best fat Durham heifer—Gold medal.

P N Rust, Syracuse, 2d do Empire Ox—Silv. medal.

Davis, Roseman & Co. N Y 3d do Washington—Dip.

HORSES—*Stallions.*

John R Sneidecker, Jamaica, L I, best, Abdallah—Silver cup.

John A Pool, N Jersey, 2d do Raritan—Silver medal.

Brood Mares.

H Watson, East Windsor, Conn. best, Betsy Wilson—Silver cup.

E Lawrence, Flushing, 2d do Iodine—Silver medal.

Colts.

G W Patchen, Brooklyn, best, Logan—Silver cup.

J M Kidd, Orange Co. 2d do Walden—Diploma.

John Wilde, N Jersey, best filly—Diploma.

Jacks.

John A Pool, N Jersey, best, Don Juan—Silver cup.

SHEEP—*Long Wool Bucks.*

W Pirnie, Rye, best, Bakewell—Silver cup.

C Blackburn, Bedford, L I 2d do—Silver medal.

Long Wool Ewes.

C Blackburn, Bedford, best, Bakewell—Silver cup.
W Pirnie, Rye, 2d do do—Silver medal.

Long Wool Lambs.

C Blackburn, Bedford, best, Bakewell—Silver medal.

Middle Wool Bucks.

O. Elliott, Middletown, N J best S Down—Silver cup.
Dr. Cutter, Shrewsbury, N J 2d do—Silver medal.

Middle Wool Ewes.

Dr. Cutter, Shrewsbury, best, S Down—Silver cup.

Middle Wool Lambs.

Dr. Cutter, Shrewsbury, best, S Down—Silver medal.

SWINE—*Boars.*

H W Tibbets, Yonkers, best Columbia breed—Sil. cup.
Charles Starr, Jr, N Jersey, 2d, Berkshire—Diploma.

Sows.

Charles Starr, Jr, N Jersey, best, Berkshire—Silv. cup.
W Love, Bloomingdale, 2d do Hampshire—Diploma.

Extra Stock.

H W Tibbets, Yonkers, best shoat—Diploma.
R F Aitken, 4 fat hogs—Diploma.
James Burling, Berkshire sow—Diploma.

POULTRY.

S B Townsend, Newtown, L I, superior specimens of Bremen geese and Muscovy ducks—Diploma.

DAIRY PRODUCTS—*Butter.*

S Yates, Palatine, N Y best—Silver cup.
John A Smith, Orange Co. 2d do—Diploma.
H W Strong, do 3d do—Diploma.

Cheese.

S Penny, N York, best—Silver cup.
A B Ludlam, do 2d do—Diploma.

PLOWS AND PLOWING.

Minor, Horton, & Co, Peekskill, best plow—Sil. cup.
F L Wyckoff, Flatbush, L I 2d do—Silver medal.
Mooers & Slater, Ithaca, best plowing—Silver cup. [This was done with their side-hill plow, to which was awarded the gold medal from the Institute last year.]
F L Wyckoff, Flatbush, 2d do—Silver medal.
Minor & Horton, Peekskill, 3d do—Diploma.

FIELD CROPS.

L Wyckoff, Bushwick, L I best field of cabbages, 20 acres—Silver cup.
Garret Vreeland, N Jersey, 2d do—Diploma.
F J Betts, Newburg, best field of corn—Silver medal.
R F Carman, Fort Washington, N Y 2d do—Diploma.
F J Betts, Newburg, best field of oats—Silver medal.

FRUIT.

W P Buel, Albany, 62 kinds of apples—Silver medal.
R A Cornwall, 49 Dey street, superior apples—1 vol Am. Orchardist.
R L Pell, Pelham, superior winter do—Bridgeman's Gard. Ass't.
Peter A. Ross, 225 Thompson-st. do do—U S Farmer.
S G Carpenter, 476 Bowery do do—Cultivator.
Dr. R F Underhill, Croton Point, superior pippins—Bridgman's Gard. Asst.
A J Downing & Co 30 varieties of pears and 50 of apples—Silver medal.
J P Mantel, 62 do and 10 do—Silver medal.
W Reed, corner 34th-st and 4th avenne, superior table and winter pears—Am. Orchardist.
W Mosely, New Haven, Conn. specimens of winter pears—Bridgman's Gard. Asst.
Judge T Dickerson, Paterson, N J, Sickle pears—Am. Orchardist.
R L Pell, Pelham, choice quinces—Am. Orchardist.
Dr. R F Underhill, Croton Point, do—Gray's Agriculture.
Thos. H. Perkins, Boston Mass., 11 choice varieties of foreign grapes—Silver medal.
Dr. Underhill, Croton Point, Isabella and Catawba grapes—Johnson's Agricultural Chemistry.
Matthew Antonides, Brooklyn, Isabella grapes—Gray's Agriculture.
John P. Haff, Fort Lee, N. J., Field grapes—U. S. Far.
Ed Classen, 219 Delancey street, Sweet Water grapes—Manning on Fruits.
Jas W Burtis, Brooklyn, choice grapes—Am Orchardist
Barnum Blake, Franklin, Mass, cultivated cranberries—American Agriculturist.

AGRICULTURAL PRODUCTIONS.

Geo Chesterman, Harlem, 40 ears white corn—3 vols Cultivator.
J Van Valkenburg, Harlem, 40 ears yellow corn—3 vols Gen Farmer.
Wm P Buel, Albany, specimens of Dutton do—Dip.
N N Wyckoff, Bushwick, L I, Tuscarora do—Cultiv.
Grant Thorburn, Astoria, L I, Chinese do—Diploma.
E R James, Poughkeepsie, 1 bushel White flint wheat—Diploma.
General R Harman, Wheatland, 11 beautiful varieties of wheat.—Medal.
J Van Winkle, Bergen, N J, Egyptian wheat—Dip.
J De Peyster, Flatbush, L I, do Diploma.
Holt & Owen, 209 Front street, 1 bushel superior buckwheat—Buel's Far. Companion.
D H A Field, 3d Avenue, 1 bushel superior oats—3 vols Cultivator.

FLOWERS.

Thirty-one awards were made for superior specimens of flowers sent to the garden during the Fair.

VEGETABLES.

John Bakewell, 61st street, for the best and greatest variety of culinary vegetables—Silver medal.
J James, Hurl Gate, best and greatest variety, cultivated as a field crop—Silver medal.
R F Carman, Fort Washington, Sugar beets—U S Far.
M Hughes, Long Island, mangold wurzel—Gray's Agri.
J C Thompson, Staten Island, Cape broccoli—Bridgeman's Assistant.
Daniel C Folk, Newtown, Drumhead cabbage—Downing's Rural Architecture.
John E Ross, 225 Thompson street, Drumhead cabbage—Diploma.
S A Willoughby, Brooklyn, Celery, &c—Johnston's Agricultural Chemistry.
Thos Addis Emmett, 79th street, Egg plants, &c—Bridgeman's Assistant.
Jas Wiggins, Corporation garden, Blackwell's Island, white and silver skin onions—Buel's Far. Compan.
Wm Van Wyck, Fishkill, N Y, red and silver skin onions—American Agriculturist.
John Bryel, Jersey City, superior culinary vegetables—Gray's Agriculture.
T B Wakeman, Bergen, N J, best table potatoes—Manning on Fruits.
H W Tibbits, Yonkers, choice do—Johnstone's Agri. Chemistry.
N B Smith, Woodbury, Conn, superior do—Cultivator.
S B Townsend, Newtown, L I, choice do and turnips—Gray's Agriculture.
R N Wyckoff, Bushwick, L I, superior garden products—Bridgeman's Assistant.
N Wyckoff, Bushwick, L I, do do—Buel's Com.
Edwin Lord, Staten Island, pumpkins and squashes—Bridgman's Assistant.
Wm Golding, 29th street, superior pumpkins—Am. Agriculturist.
Jas Foulk, Hurl Gate, extra large do—Davis' Muck Manual.
Henry Townsend, Hyde Park, do do U S Farmer.

Wm H Hughes, Gowanus, L I, superior Cocoanut squashes, &c—American Agriculturist.
Will Covert, L I, superior garden products—U S Far.
E J Swords, Bloomingdale, Smyrna squashes—Johnstone's Agricultural Chemistry.
R L Pell, Pelham, superior culinary vegetables—Dana's Muck Manual.
John P Haff, Fort Lee, N J, numerous varieties of garden products—American Agriculturist.
Henry Delafield, superior culinary vegetables—Bridgeman's Assistant.
D N Demarest, N J. 2 Smyrna squashes and a case of eggs—Dana's Muck Manual.
S Courter, 28 Barrow street, 1 large pumpkin—Dip.
J Stowes, N Jersey, superior celery—Diploma.

Raw and Manufactured SILK.

B & W H Jones, Manchester, Conn, best sewing silk—Diploma. (Silver medal having been before awarded.)
E Golding, Mansfield Centre, Conn, 2d best do—Dip.
J Ryle, Paterson, N J, best ball twist, sewing silk, &c—Silver medal.
Wm B Fink, Windham, Conn, sewing silk—Diploma.
John McRae, 109 Canal street, silk cords, gimps, and binding—Diploma.
Eleanor M La Fetra, N Jersey, a pair silk stockings—Diploma.
James Hawley, 22d street, harp strings from Am. silk—Diploma.
Salmon Higgins, Ithaca, N Y, best specimen raw silk—Gold medal.
Wm Naylor & Son, 552 Broadway, for silk doubler and winder—Silver medal.

There were some beautiful cocoons and choice silk goods shown, not specified above.

AGRICULTURAL MACHINES AND IMPLEMENTS.

D H Southworth, Newburg, best smut machine—Dip. (Gold medal having been before awarded.)
Leonard Smith, Troy, 2d best do do—Diploma.
Josiah Pratt, Bridgeport, Conn, portable grist-mill—Diploma.
Prentiss & Page, 40 Eldridge street, do do—Diploma.
S W Bullock, Catskill, best cotton press—Diploma.
Wm Bullock Jersey City, combination power press, best for hay—Diploma.
W S Jacks, Catskill, lever railway press 2d best for hay—Diploma.
C T James, Newburyport, Mass, Dynamometer—Dip. (Silver medal before awarded.)
J Williams, Jr, Salem, N Y, Dynamometer—Diploma.
P H Rells, Claverack, N Y, horse power machine—Dip.
Saml Pennock, Chester co, Pa, best drilling machine—Silver medal.
Botts & Burfoot, Richmond Va, best straw and stalk cutters—Silver medal.
John Standish, Fishkill Landing, straw cutter—Dip.
P H Rells, Claverack, N Y, straw cutter—Diploma.
John Moore, 31 Fulton street, best corn sheller—Dip.
Calvin Olds, corn planter—Diploma.
Geo Page, Baltimore, Md, do—Diploma.
Collins & Stone, Ohio, } new cheese
Kennedy & Co, agts, 231 Pearl street, } press—Diploma.
H Branch, Brooklyn, hemp and flax breaker—Diploma.
Valentine Brily, Baltimore, Md, corn and cob crusher—Diploma.
Mark Poole, Brooklyn, 3 garden syringes—Diploma.
H Tower & Co, Milbury Mass, garden hoes—Diploma.
Ed Townley, 75 Thompson street, 9 good bee-hives—Diploma. (Silver medal before awarded.)

Several beautiful specimens of honey were exhibited from Mr. Thompson's hives.

The Agricultural Show was held in the large square, at the corner of Broadway and 14th street. Two long double sheds, extending lengthwise through the area, were appropriated to the cattle, and pens were conveniently arranged on two sides, for the sheep and swine, while ample room was afforded for the exhibition of the horses, and working and fat cattle, in the centre. The number of entries for cattle exceeded 100 horses, mares and colts, 15 or 20; sheep, 50; swine, about 60; mules, none; jack, one.

There were several beautiful specimens of short horns, though but a few were shown, and those from a limited number of herds. Mr. Prentice exhibited a few of his choice ones; also Mr. Poole, Mr. Emmet, and some others. But those on the ground were few, in comparison with the numerous fine specimens that might have been shown; and we can only hope that such arrangements will be made hereafter, as will call out the choice herds in full force another year. The Durham cow exhibited by Mr. Smith, of Brooklyn, gave in the fall from 33 to 34 1-2 quarts of milk per day, for 20 days in succession, and averaged, from September to July, 27 quarts per day, the last four months of which she was in calf.

Four splendid yoke of working oxen were exhibited from Connecticut, and more beautiful specimens of 4 and 5 year old cattle we never saw. One yoke had the brockle face of the Hereford, with the rapid growth and rangey character of that useful breed, while the others, somewhat more compact, had all the characteristics of the beautiful New-England Devons. The training of these animals was perfect. They would perform their evolutions at the word of command, in a manner that would do credit to a well disciplined corps of men, and shame half the militia of the country; and their step was quick enough, even with a heavy load, to satisfy any driver who had to walk beside them. If any one doubts the capacity of ox labor for the ordinary purposes of a farm, let him buy a pair or two of these cattle, and he will soon be convinced of the incorrectness of his views. These were delegates from the 513 pairs of working cattle shown at the New Haven County Fair.

The immense ox exhibited at Albany, and belonging to Mr. Rust, was on the ground, and two, out of five, beautiful cattle raised by Mr. Tompkins of New Jersey. The Durham heifer, which took the prize, was the most remarkable animal ever shown in America, and not exceeded, it is presumed, by any ever

exhibited in England. We shall give her dimensions in our next. One Hereford only was shown, a bull belonging to Mr. Prentice, and imported by Mr. Sotham. No pure Devon was on the ground. The native cattle, except those above enumerated, were few, and of little pretension, though we noticed some very good crosses. Two Alderny cows were exhibited by Dr. Poole, and a singularly small, delicate, and thin, close haired China cow, with a fine, large, half blood Durham calf by its side.

In horses, the show was very limited. Abdallah, a fine trotting horse, raised on Long Island, was there, and took the first prize, and Dr. Poole's thorough bred horse Raritan, got by Monmouth Eclipse, a fleet, yet substantial horse, well adapted for getting good roadsters out of stocky mares. A stout, black Canadian, after the Norman style, was shown from Orange, N. Jersey, well suited for producing serviceable farm and dray horses. The thorough bred mare, Betsy Wilson, formerly owned by General Emory, of Maryland, but now owned by Mr. Watson, of Conn. was shown, and a good trotting mare, by Mr. Charles Starr, of N. J.

An imported Spanish Jack was exhibited by Dr. Poole, standing fifteen hands high, and so loftily was the bearing of our Assenine hero, that it seemed another fifteen hands to the top of his ears, peering like a pair of minarets from the Gothic structure beneath.

The only sheep exhibited, were the South Downs and Bakewells. There were some beautiful specimens of each of these; but we cannot forgive our farmers, that they either cannot or will not, exhibit some of the worthy descendants of the original importation of Spanish merinos. These were an invaluable improvement to the United States, and we feel as if they were desecrating, by their neglect, the memory of the illustrious dead, Humphrey and Livingston, who, nearly forty years since, at a great sacrifice of time and money, sent these choice representatives of the woolly tribe to this country. There should be, and can be, better things done for the fine wool interests of the country, and we trust such measures will be taken as to secure a creditable display of these animals, in 1843.

The swine were fairly represented in the Berkshires, Chinas, and their crosses. There were some beautiful specimens of these, and if any one doubts that it is the corn-crib alone that makes the pork, let him scan closely the fine forms, thin hair, mellow elastic handling, the delicate limbs, and quiet countenance, expressive of peace with all the world, exhibited by some of the grunters inside the yard, and their Hammish kindred without, a roaming, restless, thriftless brute, with legs reaching to the back-bone, the bristles of a porcupine, the hide of a rhinoceros, the snout of a plowshare, and all the grim aspect and unthrifty look of a wolf or hyena; thrice cursing the human race—a curse to their neighbors, a curse to their feeders, and a curse to their eaters.

The show on the whole, though progressive, was not what it should have been, and not what we hope to see it hereafter. There is much fine stock within a reasonable distance of this City, which ought to be exhibited at this Fair, and our own exertions shall not be wanting to call it out another year.

The agricultural implements were limited in number. We shall notice them more particularly in connection with the reports; some of which we intend to give in our next.

The only field crops entered for prizes, were those enumerated in the list of premiums, which show that exertion alone is wanting to insure excellence in this department.

MANUFACTURED ARTICLES, &c.

The Fair for the exhibition of Manufactured Articles, Fruits, Flowers, and Horticultural Productions, was held in the spacious saloon at Niblo's, and the premises adjoining; and a rich and beautiful display it was, and well calculated to gratify every truly patriotic feeling, and inspire the fullest confidence, that every rational want, either of necessity, comfort, or luxury, can be adequately supplied by our own citizens, and from our own resources. We cannot, of course, be expected to give more than a passing glance at the things innumerable, that met the eye at every turn, nor would it be proper thus to occupy our sheet, had we room; yet the temptation is irresistible, to mention a few of the prominent articles, which, we trust, will not be without interest and instruction to most of our readers.

In the room appropriated to cloths, we observed some beautiful specimens of broadcloths, the gold medal for which went to the Middlesex Comp., Lowell, Mass. Rich and varied specimens of fancy cassimeres, fanciful enough, we should judge, to satisfy the most Parisian taste, yet possessing a firmness and durability that marks them as peculiarly American. There were felt beaver cloths, of a thickness and substance equal to a pine clapboard, down to the substantial fabric suited to an outer zero garment. Beautiful, delicate flannels, of a texture finer than we ever noticed in a foreign article, were sent from Ballard, Vale & Co., Andover, Mass., who were justly complimented with the gold medal.

The cotton goods were not numerous, but of great merit. Elegant chintz, tasteful calicos, and beautiful cambrics, each of a substantial kind, leave our ladies, *who wear American hearts*, no excuse for not wearing American clothing with them.

In shoes, and all that pertains to the physical understanding, our artisans seem to have eclipsed themselves; and were some of our dandies in Europe, with a particle of just taste in their noddles, they would im-

port these articles from the United States, instead of wearing what they now send 4,000 miles to procure.

The Leather department, especially of the fancy kind, was amply represented. Among the numerous varieties, was shown a piece of morocco, which had been taken from the living goat, cleaned, thoroughly tanned, dressed, and from a part of it, a pair of shoes had been made, all within the incredibly short space of 12 hours.

The stuffed birds were there, in all their rich, and gay, and varied plumage; and so natural was their appearance, and so spirited their attitudes, that we almost listened to hear their merry notes.

A case of glass eyes, looked life-like enough to ogle a timid maiden, or frown terrors into a heart of steel. Let those who doubt the effectiveness of this organ alone, gaze on these spectral things, and they will no longer question their power. We have seen many worse in use, and could properly enough advise some, as Lear did Gloster,

"Get thee *glass eyes*,
And, like a scurvy politician, *seem*
To see the things thou dost not."

In hats, we have nothing left to desire. For forty years, at least, we believe America has made as perfect and tasteful beavers as the world affords. The display of this article was numerous and elegant. Some specimens of the Florence braid, and the Tuscan and Amazone bonnets, were not to be surpassed in beauty and durability.

The articles of fancy work, embroidery, and all the et ceteras of female taste and ingenuity, including the half finished *forms* that adorned the transparent cases, whose exquisite mouldings, following the lines of beauty, Burke has so justly delineated, and which a Phidias or Praxitiles might embody in a more durable, but not a more enchanting guise, only served to excite a desire that the remaining outlines had been filled up; but as in these, and the whole class of female adornments, that existed with so much profusion and taste, we are but novices, we must glance over them in silence, and confine ourselves to the more substantial matters of interest.

The display of silver and brittania ware, clocks, chronometers, philosophical and nautical instruments, cutlery of all kinds, buttons, needles, pins, cut glass, &c., leaves us nothing unprovided for in these varieties. More tasteful, accurate, or highly finished articles than those above enumerated, are not to be found, than filled the shelves and show cases. Surely, if we can make what was there shown, we can make anything.

The variety of india rubber articles would seem to be nearly perfected, from the display we saw; and consciences can now, we should think, be made to order elsewhere, than at Washington and our State capitols, Wall street and minor places, and much more Chesterfieldian, combining the elegant and the graceful, with the useful and convenient.

The submerged, and tide, and current water wheels, canal lock gate, iron planing, and screw bolt cutting machines, are all inventions of great merit and utility. There were splendid specimens of rolled brass and copper, and a very successful imitation of Russia sheet iron, and many specimens of boiler iron, not to be exceeded in merit. There were several beautiful samples of solar, coarse, dairy, and table salt, from Syracuse; also fossil salt from the Virginia mines, and beautiful Epsom salts, alum, copperas, and other chemicals; splendid chandeliers, girandoles, astral, oil, camphine, and lard lamps. There was a model of an improvement applied to bridges, by that veteran builder, Capt. Damons, of Northampton, Mass., in which the braces stand only in one direction, and an inverted, added to the usual arch, gives in this combination, a vast additional strength and stability. There was also a new, and it appeared to us a peculiarly safe, yet economical lock, exhibited by Mr. Wilson from the same town. Eli Kirk, 300 Broadway, sent in some beautiful ornaments manufactured from Anthracite coal, that rivalled the precious gems almost, in glossy beauty. Burden of Troy, was there too, with his patent horse shoes, which he will hereafter make, almost as cheap as cut nails, and save the farmers many a lost day, in waiting on the laggard Vulcans, while forging this never ready article by hand. We hope he will send the nails along with them, as they are always to be made at the last minute. Braziers' rods, *made throughout with Anthracite coal*, by Peter Cooper, of this City, well merited the gold medal they received. Several specimens of iron roofs were shown, and utensils of galvanized iron, saturated with zinc, and unassailable by rust, would seem to elevate the coarser metals, in some measure, to a par with the finer and more precious. Mr. Webb, of Wilmington, sent some beautiful specimens of corn stalk sugar. There is but one thing left for him to do in this matter, which is to demonstrate the practicability of making it *profitably*, and the silken tassels of the right hand gift of the Indian goddess, will wave in the richest luxuriance, almost uninterruptedly from Cape Horn to the sources of the Mississippi. We reluctantly close this brief notice, with the fact, that 1700 *specimens* were here exhibited, showing a considerable increase in the display over any preceding Fair.

Tussack Grass.—Captain Ross, of the Antarctic Expedition, recently from the Falkland Islands, gives a glowing description of a new species of *Bog Grass* discovered there, which it may be of great importance hereafter to add to the productions of our own country. We quote from the (Eng.) New Farmer's Journal. He says—

"The splendid tussack grass is the gold and glory of these islands. It will, I hope, yet make the fortune of Orkney and Irish landowners of peat bogs. Every animal here feeds upon it with avidity, and fattens in a short time. It may be planted and cut like the guinea grass of the West Indies. The blades are about six feet long, and from 200 to 300 shoots spring from one plant. I have proved, by several experiments, that one man can cut 100 bundles in a day; and that a horse will greedily devour five of these in the same time. Indeed, so fond of it are both horses and cows, that they will eat the dry tussack thatch from the roofs of the houses in preference to good grass. About four inches of the root eats like the mountain cabbage. It loves a rank wet peat bog, with the sea spray over it. Indeed when the sea beats over it with the greatest violence, and the sea spray is carried furthest, then the tussack grass thrives best on the soil it loves. All the smaller islands here, though some of them are as large as Guernsey, are covered with tussack, which is nutritious all the year. The whole of the gentlemen on the expedition are delighted with the Falkland Islands, and express themselves as being more pleased with them than even with New Zealand. Some think them in every way better for colonisation, even with the drawback of wanting timber trees there. I have tamed a guanacoe from Patagonia. He lies down before the fire, with his head on my knee, like a dog, though he is now as tall as a donkey. I hope to get more in the Falkland Islands. They browse on the poorest land, and their flesh is like venison. Their wool is thick, but I fear not so valuabe as that of the alpaca. I hope soon to give a favorable account of my adding to our domestic breed of animals the valuable fur seal."

Patent Stucco Paint Cement.—A respectable English Journal announces a new invention of *Stucco* which is pronounced *perfect*, after the following fashion :—

"We have had an opportunity of seeing some specimens of this cement that have for three years been exposed by the sea-side in a situation subject to the storms of winter and the heat of summer, in Plymouth, where the cement is manufactured, and where the climate is well known as not the most dry in the kingdom; and we were surprised at finding a complete growth of granite stone, from what was, when laid on the walls of the building, a sort of fluidized substance mixed with sand. We could hardly, in fact, find a more appropriate name for the composition than a fluid stone. It may be applied by a common plasterer, with his ordinary tools, over any surface, be it brick, or plaster, or old stucco, or wood, or slate, or even glass itself (such is its tenacity); any building covered with it becoming encased in stone, resisting and defying as it ripens or becomes hard, any action of the atmosphere either of wet, frost, or heat, increasing in hardness the more exposed it is, and is arriving at maturity and perfection when other cements and stuccoes are beginning to perish."

If this is not some egregious puff, of which we must acknowledge ourselves somewhat suspicious, it must prove invaluable to such as desire an air tight, water tight, durable and elegant building. The composition is not given.

Erie County Agricultural Fair.

On the 5th and 6th of October we had the pleasure of attending the Erie county Agricultural Fair at Buffalo, together with the Mechanics' Association for the same county, and their Rochester guests, who united with them in a fine display of furniture, edge tools, and a great variety of other things combining the elegant and the useful. The weather was of the most delightful autumnal kind throughout,—the mechanical show was in the beautiful, large stone cottage of Doctor Johnson,—while the agricultural was held in the extensive grounds and shady park which adorns it immediately in the rear. It was said to be twice as extensive in animals, and various other things, as that of last year, and in visitors, especially ladies, to have been at least quadrupled, showing that the interest in agriculture and all appertaining to it is greatly upon the increase in this quarter.

Of Horses, the exhibition was much superior to what we supposed it could have been, comprising several very fine stallions, brood mares, colts, and match and single horses in harness. The stock most highly approved was the produce of the celebrated trotting horses, sent out here several years since from Long Island, by T. T. Kissam, Esq., of New York, being full brothers, Bellfounder and Bellport.

The show of neat cattle was such, as, we will venture to say, few counties in the state will equal, though we can recollect, nine years since, that not a single improved animal was owned in the county. Mr. L. F. Allen, of Black Rock, had up a draft of 13 head of Durhams and Devons, while Mr. Warren Granger, and some others, fell but a little behind in the display of numbers and grades, and natives also were plenty, of a superior quality, together with about twenty yoke of superb working oxen, and fat beeves and steers, that it would have done credit even to the Smithfield market of England.

In sheep, the exhibition was quite limited, a few natives, South Downs, and Merinos, and a greater number of Leicesters.

The number of swine was not large. The best were of the Berkshire breed; but some others, of a most enormous size, struck us as being a cross of the Woburns.

Of Butter, when we consider the great number of large dairies in this vicinity, the show was very meagre, but for this deficiency ample amends were made in the cheese. A lot of five, weighing about 100 lbs. each, belonging to Mr. Arnold, took the first premium; some others, of very great dimensions, we thought of scarcely inferior merit. They weighed respectively 278¼, 269, 267½, 267, and 252½ lbs. They were made by Mr. Austin, of Hamburg, who keeps 80 cows—each cheese being made from three milkings of the whole herd. James Murray, Esq., of this city, purchased the largest at 10 cents per pound, to send to his friends in Scotland. We shall not be much surprised if the bonny Scots, upon it's arrival, took it for an additional hill among the Grampians, or Cheviots, fresh risen under the auspices of a gilded moon, from old Ocean's watery bed. The product of Mr. Austin's dairy the present year will be at least twelve tons, and some of his neighbors scarcely fall behind; indeed, Hamburg, in Erie county, has become one of the most celebrated dairy districts in the United States, though it has been recently settled, and we have never heard of their being beaten in size, except in one instance which we believe was by Col. Meecham, of Oswego.

The Farm Implements were a very poor show, as to numbers and variety, and we really hope to see, in this great commercial and agricultural depôt, a better one hereafter. Mr. Smith, the plow manufacturer here, had a fair assortment; others exhibited scarce over two each. The Furnaces were pretty fairly represented in stoves; that exhibited by Mr. Dudley being the best, most durable, and simple, which we have yet seen for plain cooking in the farmer's family.

In farm, garden, and green house Plants, and grains and roots, there was a fine display, the same also of household manufactures, cocoons and silk.

The Mechanics' Show was quite respectable. The plowing match was a very spirited contest, and we thought excited more attention than anything else. Five noble pairs of horses, and one yoke of cattle entered for competition; the quantity of land to be plowed being one quarter of an acre. The work was beautifully done in very close time, Mr. Curtis' team taking the prize, having accomplished the task in 51 minutes.

The committees then made their reports, which were short and to the point, and read upon the ground, and the prizes declared off by the secretary, and the Society adjourned to the 15th of November, when the premiums for the best improved farms, root, and grain crops, will be passed upon.

A very pretty display of Poultry was made upon the occasion, and among the curiosities, we noticed some China fowls, exhibited by Mr. Hodge, and but little larger than full grown Woodcocks.

Black Palmer Worm.—We notice in the last New Farmers' Journal, of England, that Wm. Webb has succeeded in effectually destroying this pest, which had taken possession of a field of Sweeds turnips. He first tried *smoking* them, without any effect. His next application was dust scattered on the leaves, which threw them upon the ground, but they soon recovered and recommenced their ravages. The plan then adopted, was to take large succulent elder boughs,

draw them over the plants, by which they were swept on to the ground, and while in this situation, he sowed *fresh slacked lime* over them, which nearly cleared the field. A subsequent application of the last remedy, effectually vanquished the marauders.

Raising Indigo.—We would earnestly call the attention of our southern agriculturists, to the consideration of again making indigo a staple in their productions. It was formerly raised in large quantities at the south, but we believe the profit of producing it was materially lessened by its subsequent extensive culture among the natives of British provinces in the East Indies and elsewhere; and the great demand for cotton since created here, has withdrawn public attention from this subject altogether. A writer in the S. W. Farmer says, one reason of abandoning the cultivation of it in South Carolina was, the escape of an offensive, and to some extent, deleterious gas, in the fermentation. This difficulty, modern chimistry can *undoubtedly* obviate. Edwards' history of the West Indies, written many years since, gives some important data on the culture, manufacture, and expense of producing it, though a modern American genius put on this subject, will doubtless develop some new, improved, more economical, and profitable plan of raising and preparing it for market.

Tour in England, No. 8.

Irrigation and Water Meadows.—One of the greatest and most beautiful agricultural improvements that we saw in England, was the water meadows; and these interested us the more, in consequence of our feeling the necessity of adopting them in our own climate, where they are doubly needed on account of its much greater dryness; and the superior facilities from the natural surface of America and its numberless rivers, brooks and springs, which seem almost formed by a beneficent Providence, for the express purpose of irrigating our thirsty and parched lands. We shall pass over such as are found on the Humber, and other rivers emptying directly into the sea, as they are flooded by means of embankments through sluices, at the rise of tides, in a manner already familiar to our readers on the Jersey marshes in the vicinity of New-York, as also at Philadelphia and other places along the sea coast. They are also much on the same principle as the rice fields at the south, which are flooded from the sea or the Mississippi.

All who have ever heard of the overflowings of the Nile, or passed up the magnificent valley of the Connecticut, along the banks of the Genesee, and the wide spread delta of the Mississippi, and hundreds of others of our rivers, cannot but have noticed the surpassing fertility given to the land, in consequence of the annual rise of their waters, and the deposite from the enriching sediment; it is to avail themselves of something like the advantages of these great overflowings, on a small scale, from their own little rivers, that the English landholders have constructed their water meadows, and in some instances have gone to a very great expense in so doing. It is computed that there are at least 70,000 acres of water meadows in Gloucestershire, Berks, Wilts, and Hants, which have been made at an expense of from 5*l.* to 45*l.* per acre, the average not being less perhaps than 15*l.* or say $75 per acre. Johnson asserts, that in 1821 forty acres of the Freegate Whins, ten of which were made from a poor sandy soil, thrown up by the sea in the vicinity of Edinburg, cost 1000*l.*, and let for about 600*l.* per annum, and are in a constant state of improvement. The Craigintinny meadows, near the same place, let for 20*l.* to 30*l.* per acre per annum, while "in 1826, part of the Earl of Moray's meadow fetched 57*l.* ($275) per acre per annum." But it must be recollected that these are in the vicinity of a large town, where the grass is cut daily, and carried in fresh, and retailed at high prices for soiling. In no other way could these meadows command such exorbitant rents. They yield four to five crops of grass every season, which if dried, it is estimated would nearly equal two tons in weight at each cutting. But the water used here for overflowing is unusually *rich*, it receiving the wash of all the sewers of this large town, and hence their greatly increased fertilising effects.

As it respects the enriching matter found in other waters, we quote from Johnson's Far. Ency. page 684. "With regard to the composition of river water, there have been several chimical examinations; that of the Thames was analysed by Dr. Bostock, who found in 10,000 parts, after most of its mechanically suspended matters had subsided, about 1 3-4 parts of foreign substances, viz:

	Parts.
Organic matters,	0.07
Carbonate of lime,	1.53
Sulphate of lime,	0.15
Muriate of soda,	0.02

"In an equal quantity ot the waters of the Clyde, Dr. Thomson found 1 1-6 part of solid substances, namely,—

	Parts.
Common salt,	0.369
Muriate of Magnesia,	0.305
Sulphate of Soda,	0.114
Carbonate of lime,	0.394
Silica,	0.118

"The water of the Itchen in Hampshire is one of the most celebrated of all the southern streams, for the use of the irrigator. I found in 10,000 parts of its water, about 2 1-2 parts of solid matter, viz:—

	Parts.
Organic matter,	0.02
Carbonate of lime,	1.89
Sulphate of lime,	0.72
Muriate of soda,	0.01

"From an examination of the substances found in these streams, (and they afford a pretty correct view of the contents of most others,) the farmer will see that they all yield ingredients which are the food or natural constituents of the grasses. Thus, sulphate and carbonate of lime are found in most of them, and there is no river-water which does not contain, in some proportion or other, organic matter.

"If the river-water contains gypsum (sulphate of lime) which it certainly does—if the water is *hard*, it must, under ordinary circumstances, on this account alone be highly fertilising to meadows, since all grasses contain this salt in very sensible proportions; for, calculating that one part of sulphate of lime is contained in every two thousand parts of river water, and that every square yard of dry meadow soil absorbs only eight gallons of water, and this is a very moderate allowance, for many soils will absorb three or four times that quantity, then it will be found that, by every flooding, more than one hundred weight and a half of gypsum per acre is diffused through the soil in the water, a quantity equal to that generally adopted by those who spread gypsum on their clover crops, lucern, and sainfoin, as a manure, either in the state of powder, or as it exists in ashes. And if we apply the same calculation to the organic substances, ever more or less contained in flood waters, and allow only twenty parts of animal and vegetable remains to be present in a thousand parts of river water, then we shall find, taking the same data, that every soaking with such water will add to the meadow nearly two tons per acre of animal and vegetable matters, which, allowing in the case of water meadows, five floodings per annum, is equal to a yearly application of *ten* tons of organic matter.

"The quantity of foreign substance present in river-water, although commonly less, yet very often exceeds, what I have thus calculated to exist in it. I have found it impossible, however, to give from analysis the amount which, under ordinary circumstances, is present in river waters, with any tolerable accuracy, since the proportion not only varies at different seasons of the year, but a considerable proportion of the merely mechanically suspended matters subside, when the specimen water is suffered to rest. In my conclusions in regard to the theory of irrigation I have found many excellent practical farmers concur. Thus Mr. Simmons of St. Croix, near Winchester, considered that the great benefit of water flooding for mead ows is derived, in the first place, from the deposites made by the muddy waters on the grass; and, secondly, from the winter covering with water preventing the ill effects to the grass of sudden transitions in the temperature of the atmosphere. This gentleman is perfectly aware of the value of the addition of the city drainage of Winchester to the fertilising qualities of the Itchen river water, and of its superiority for irrigation after it has flowed past the city, having water meadows both above and below the town; and he finds that, if the water has been once used for irrigation, that then its fertilising properties are so materially reduced, that it is of little value for again passing over the meadows."

Sir Humphrey Davy thus explains the fertilising effects of irrigation:—"In general, in nature, the operation of water is to bring earthy substances into an extreme state of division: but in the artificial watering of meadows, the beneficial effects depend upon many different causes, some chimical, some mechanical. Water is absolutely essential to vegetation; and when land has been covered by water in the winter, or in the beginning of spring, the moisture which has penetrated deep into the soil, and even the subsoil becomes a source of nourishment to the roots of the plants in the summer, and prevents those bad effects which often happen in lands in their natural state, from a long continuance of dry weather. When the water used in irrigation has flowed over a calcarious country, it is generally found impregnated with carbonate of lime; and in this state it tends, in many instances, to ameliorate the soil. Common river-water also generally contains a certain portion of or-

ganisable matter, which is much greater after rains than at other times; or which exist in the largest quantity when the stream rises in a cultivated country. Even in cases where the water used for flooding is pure, and free from animal or vegetable substances, it acts by causing a more equable diffusion of nutritive matter existing in the land; and in very cold seasons it preserves the tender roots and leaves of the grass from being affected by frost. Water is of greater specific gravity at 42° Fahrenheit, than at 32°, the freezing point; and hence in a meadow irrigated in winter, the water immediately in contact with the grass is rarely below 40°, a degree of temperature not at all prejudicial to the living organs of plants. In 1804, in the month of March, the temperature in a water meadow near Hungerford was examined by a very delicate thermometer. The temperature of the air at seven in the morning was 29°. The water was frozen above the grass. The temperature of the soil below the water in which the roots of the grass were fixed, was 43.° In general those waters which breed the best fish are the best fitted for watering meadows; but most of the benefits of irrigation may be derived from any kind of water. It is however a general principle that waters containing feruginous impregnation, though possessed of fertilizing effects when applied to a calcarious soil, are injurious on soils which do not effervesce with acids; and that calcarious waters, which are known by the earthy deposit they afford when boiled, are of most use on silicious soils, or other soils containing no remarkable quantity of carbonate of lime."

In forming water weadows in England, if the ground be nearly flat, the surface is made as even as possible, by levelling all little hillocks and filling up the hollows; a dam or weir is then thrown across the stream above, and the water brought in by a main feeder, from which small ditches are cut in those directions through the field, which are best calculated to distribute it in the quickest time and most evenly, and the surplus then carried off, so as to leave the meadows perfectly free from all standing water, when required. When the land is descending, canals or ditches are cut out running parallel with each other along its whole length, thus forming the meadow into beds of slightly descending terraces. The water in sluices is then let into the upper canal, from which, when full, it slowly runs over, trickling along and irrigating the space of ground below, and is then taken up by a second ditch, and so on as long as the descent of the meadow continues and the whole is watered. Three cuttings of hay are usually obtained from these meadows every season, averaging about five tons of dried grass in all; and in addition they yield considerable late fall and early spring pasture. In letting on the water, they are managed differently according to the weather and circumstances; but it is always intended that they shall have the benefit of the October and November floods, as these are known to abound in more fertilizing matter, than those of the winter and spring. At this time the water is kept on three or four days, a week, or fortnight at a time, with such intermissions for drying as are thought proper, and again let on in the spring, and generally, immediately after each cutting of hay in the summer, for be it remembered, that the *fertility* imparted from the water, is even more sought after than its *moisture.* In the drier climate of America, the moisture, perhaps, will be as beneficial as the fertilizing substances which the waters hold in solution, and which are so evenly distributed over the ground, for the nourishment and rapid growth of the grass.

It is said that irrigation has been practiced more or less in England ever since its occupancy by the Romans, but according to Loudon, the importance of it was not much considered till the publication of Vaughan's work on this subject, in 1610. Attempts, however, at this great improvement in agriculture, could not have been of much account till a century and a half later, as he adds further on, "that the principal scientific efforts in watering lands, have been made during the latter end of the last and beginning of the present century, in consequence of a treatise on the subject, by George Boswell, published in 1780, and various others by the Rev. Thomas Wright, which appeared from 1789 to 1810.

We understood that the cultivation of water meadows was considerably on the increase in England; we wish we could add the same of our own country, where they are much more needed, especially in the southern parts of it. We believe with a proper system of irrigation, that the growth of grass might be doubled during the summer, above the 40° of latitude, and be had in great profusion from this to the 35°, nine to ten months of the year, and from thence south the whole year round. We hope that the attention of our countrymen will be aroused to the importance of commencing an im-

provement so useful, so feasible, and which is so sure to repay them a large interest for the capital laid out in it, on sandy and dry gravelly soil.

The Great Miami.

This beautiful valley is so much like the Sciota, that one description of its general natural features, may answer for both, save that the stream of the former pours out a larger volume of water into the Ohio than the latter, and we should judge that its bottoms have a greater average width, being, as we were informed, at least three miles broad in several places that we passed in winding along up the river, though the general width is probably not more than the half of this. The soil is a light brown color, inclining to yellow and of the richest alluvial, from two to ten feet deep, sometimes based directly upon the limestone ledge or gravel, but more generally separated from it by a substratum of a greater or less intermixture of sand and clay. It is friable and easily worked—but not so sandy as to burn or much endanger, even in the dryest season, the immense corn crops that annually wave with such luxuriance over this fertile valley.

The Miami is not a dull sluggish stream, but abounds in rapids with sufficient fall to give water power at any time that it may be necessary, for an immense manufacturing business. The fall near Hamilton alone, within the space of four miles, is estimated at twenty-eight feet, with sufficient water even in the driest times, to turn 160 pairs of mill-stones.

This valley was settled principally by New Jersey and other northern people, and is divided into small farms, generally from one hundred to two hundred and fifty acres each, which are cultivated personally by the owners. They are an intelligent, moral, and industrious people, all possessing the comforts of life, and many, those of its luxuries and elegancies in a high degree. Several fine towns are found here, the principal of which are, Hamilton, Middleton, and Dayton, where the Mad river, the largest branch of the Miami enters, and adds much to its volume of water. The bottoms along the river are devoted principally to corn, which the farmers cultivate with great ease and perfection. It yields from fifty to ninety bushels to the acre, planted in the usual manner, in hills four feet apart. The average product may be reckoned at sixty to sixty-five bushels to the acre. After a successive cropping of twenty or thirty years in corn, the bottoms will produce wheat at the rate of twenty-five to forty bushels per acre, according to the season.

The uplands bordering this valley are also excellent for corn, and the smaller grains, as well as grass, and the different varieties of roots, the particular cultivation of which, and course of cropping, we shall describe hereafter.

A considerable number of superior animals of different kinds have been introduced into this valley, and the people are spirited in improving their stock. Some of the largest sized blood horses have stood here from time to time, and this produce they are now crossing with powerful trotting stallions, for the purpose of breeding good roadsters and carriage horses, in which they will undoubtedly be very successful. Durham cattle, with now and then a Hereford and Devon with their crosses abound. The Short Horn, however, prevail, as their good size and early maturity suit the rich pastures of the country, and their cross is found to produce better milkers than any other breed. Not much attention has yet been paid to sheep in large flocks, principally, we believe, on account of the destruction by dogs, each family contenting itself with a sufficient number to supply its own wants for wool and mutton, together with small sales occasionally at the market-towns of the valley. Saxons and Merinos abound; Leicesters and South Downs, as yet are limited. Such as find most favor with the ordinary farmers, is a cross of the coarser Merino or South Down with the Leicester, as this gives them a sheep of good size, of fair mutton, and a large fleece, the quality of which is sufficiently fine for all domestic purposes.

But the stock to which the people here have paid the greatest attention, and which is their largest and most staple production, is swine. The immense crops of corn enable them to keep vast herds of these animals, and one will find from fifty to three hundred head of the various sizes, from pigs up to immense fatting porkers, on nearly every farm that he may happen to pass. Nearly every variety of hog has been introduced here, and found more or less favor, till the Berkshires appeared, and notwithstanding a good deal of prejudice was at first excited towards them, it has gradually died away, and they may be said now to have become established from their own intrinsic merits, in general favor. This cross on the large white Miami hog, is among the most splendid animal that we ever saw. They retain nearly all the fine points of the Berkshire, with a great increase of size; we have seen them repeatedly, that

would weigh from eight hundred to one thousand pounds, and of a form and fashion almost equalling Kennilworths, and to those who are admirers of large hogs, we cannot but recommend this cross as superior to anything else that we know of in America. Of course, in so great an extent of country, the breeders are numerous, and wanting room to mention all, we can only particularise a few of the most prominent that we had the pleasure of becoming acquainted with, during our short stay in the valley.

We believe the honor of first introducing Berkshires into this quarter, must be awarded to Munson Beach, Esq., of Lebanon, whose first stock was derived some six years since, from the piggery of Messrs. A. & G. Brentnell, of Orange County, N. Y. These were followed up by others from Mr. Bement, of Albany, and at last succeeded by direct importations from England. They have been bred with great care by Mr. Beach, and very generally distributed throughout the country, to its great benefit. Near neighbors to Mr. B., are the Messrs. Steddoms, very excellent people, among whom we saw a splendid lot of Berkshires, and at Mr. Samuel Steddoms, the fine imported boar Newbury, owned at present by Charles Foster, Esq., editor of the Western Farmer and Gardener. Below Middletown is Mr. Read, where the large imported Reading formerly stood, the joint property of Messrs R. & Beach, where we saw one of the finest lot of sows that ever crossed our path; they are of great size and highly bred. But the most prominent man at present engaged in Berkshire breeding, is Mr. R. H. Hendrickson, of Middletown, who has taken up the business with great spirit. He has a beautiful farm with sufficient upland for a variety, but the greater share of it, is among the most fertile bottoms that are bounded by the Miami. These he cultivates in corn and wheat in superior style. His yield last year was about seventy bushels to the acre on an average of the former, and thirty-nine bushels of the latter, although the season, on account of the drought, was not particularly favorable for either of these crops.

Mr. Hendrickson has in his piggery, two boars and twenty breeding sows, all of the purest and best blood, and of fine size and style. The boars were both imported direct from England last year, and are Windsor Castle and Earl Craven. The portrait of the former and a particular description of him appeared in our August number, and needs no further remark from us. He is the most admired and popular animal that ever came into the Miami valley, and his superiority is at once acknowledged by all who have seen him. Earl Craven is but a trifle inferior in size, of very fine points, superior hams, and as quiet and gentle in disposition as a Chinese. He is considered among the hardiest stocks of Berkshire, England, his color being nearly a jet black, with a slight flecking of white.

Of the imported sows, we most admired Sultana: she would easily weigh six hundred pounds fatted, and to this great size, adds fine points, soft thin hair, and the mellow handling of a Durham ox. Elfrida and Arethusa are particularly beautiful, though not quite so large as Sultana, yet both have proved themselves most excellent breeders. Then there are Hermosa, Picaniny, Niskayuna, and others, all of which are not only large, but very fine, and we may close their eulogy by saying, that we have never seen stock better looked after than Mr. Hendrickson's, or pigs reared in better condition, and we freely recommend his breeding to all who may wish the Berkshire stock in the west.

We also saw at Mr. Hendrickson's, Kenilworth and Countess Amy, two very large white pigs imported from England last year the male of which, for the gratification of the admirers of big animals, he intended crossing upon the big Miami stock of the country—this pair will be very large when fully matured, and at the rate they were growing when we last saw them, it will be a size quite satisfactory to any one demanding less than a Rhinoceros. Aside from these, there was a sort of Mastodon of a hog, standing nearly four feet high, and of unknown length, and which, fully fatted, it is estimated, will weigh one thousand two hundred pounds. He is a cross of the Berkshire and Miami, and to this *baby of a pig*, Mr. H. is going to add some others of the same kind, and by way of showing what can be done in his valley, set himself afloat in a large flat boat as soon as the waters rise, and challenge the western world to show against him, from the beginning of the Ohio to the mouth of the Mississippi. We say success to his enterprise, and can only hope that he will find the waters *deep* enough to float him. In addition to hogs, Mr. Hendrickson has some fine Durhams, being joint owner with Mr. Read, in Brutus, imported by Wm. Neff, Esq., of Cincinnati. His grade Short Horns, are superior as milkers, and he greatly prides himself on this point, a quality in neat stock that we cannot too much praise, or think anything more deserving or useful.

Ashes from Anthracite Coal and City Manures.—Will some of our readers furnish us the results of experiments on the application of the anthracite ashes to different crops in dissimilar soils, and under various circumstances? We have repeatedly asked for the above information personally, but have met with no one able to give a satisfactory answer to the inquiry. By many, their utility is doubted, and others assert that they are positively injurious. We believe, on the contrary, they contain highly concentrated principles of nutrition, which only require the proper treatment, to add immensely to the fertility of our vegetable gardens and farming lands. We should be happy to demonstrate to our municipal authorities the propriety of withdrawing some of the stimulants of our olfactories, and the anthracite ashes among them, which now so abundantly fill our streets, and applying them as stimulants to the soil.

As before stated, in our 2d No. the urate from an adult in one year, contains fertilizing matter sufficient to produce over 13 bushels of wheat; and if to this we add its half, for the other excrementitious matter, we have the materials for furnishing 20 bushels of wheat annually from each person. If we estimate the population of this city, Brooklyn and their dependencies, for the purpose of including such as do not make use of these materials of fertilization, we shall have at least 350,000. The loss of ashes, garbage, and other commodities, together with the wasted manure from animals, chimical works, glass-houses, butchers premises, &c. &c., is equivalent to 50,000 more. From this deduct what is now used in poudrette, crushed bones, and animal manures, carelessly collected from the streets and carried off by our neighboring farmers, and we shall make a liberal allowance by estimating it at one half. This may appear an exaggerated estimate to the ignorant and unreflecting, but we believe its correctness will readily be admitted by the most scientific agriculturists. We have then, as the result of the annual loss to this neighborhood, from the want of proper and efficient means for husbanding this uncoined gold of the farmer, the prime materials of his wealth, 200,000 times 20 bushels of wheat, amounting to 4,000,000 bushels, or its equivalent in other products. From this, we are to deduct the cost of raising and bringing to market, which may be set down at oen half. The expense of collecting and removing the manure, we should consider as fully compensated by the absence of the noxious smells and loathsome sights, yes, and the very *taste* of the putrid things, when after being ground to an impalpable powder, they are stirred up by every passing vehicle, or ambling jade, or gust of wind, and float over our palates as we inhale the breath of life. Here is a great practical reform needed in our city, which if thoroughly carried out, would afford health to the town and wealth to the country. Did we possess a tithe of the investigations on this subject, we have on the politics of the day, and a hundredth part of the effort to mature and carry out some efficient plan for its accomplishment, that we make in electing the Namby Pambys and Tommy Noodles to a short-lived, petty office, we should secure decency, comfort, health and abundance to ourselves, instead of the more than half heathenish nuisances by which we are surrounded. We trust that some of our worthy schepens and burgomasters will take up this subject, after getting through the more important matters of the election. We can assure them, there are laurels to be won in this cause greener and more enduring, than any they can secure from the most successful political career for 20 years to come. *They* can commence a plan, but *science only* is competent to perfecting it.

It should be the next great undertaking after the Croton enterprise. We make no suggestions as to the ultimate plan. The longest experience, the deepest research, the most extensive observation, and the highest attainments of science, can all be worthily and appropriately bestowed on this object. The most gifted minds alone are competent to this task. A Davy, a Liebig or a Dana, might do much to perfect a system, though a combination of effort from all the genius of the age, would still leave this subject in its infancy. Those who affect to consider this subject *too low* for them, are mistaken in their relative positions. *They are too low* for the subject. It demands the highest attainments, and if we mistake not the spirit of the age, it will ere long receive them.

Suggestions for testing Plows.—We are not a little chagrined in being compelled to witness, in two conspicuous trials of plows this fall, at the N. Y. State Fair, and the Fair of the American Institute, the want of sufficient accuracy in the *test*, to enable the committees to speak confidently and decidedly of the result. We believe the only perfect trial of the relative draught of plows, must be made by a windlass, to be so graduated, as to its power and motion, that a man can easily move the plows at an equal and regular, though slow and suitable speed. It is certain there can be no test without perfect equality of speed, as much more power is required to move the instrument fast than slow. A furrow eight or ten feet in length, on precisely the same soils, is sufficient; and these furrows could be repeated as often as required, till a committee was satisfied. A stationary windlass would be the most simple, with the rope passing over a pulley, to be attached to a pointed bar or stake which is to be moved to the right point in every successive furrow; or what is better, a horizontal timber firmly secured at right angles with the furrows, and the chain or rope holding the pulley, could be slipped along as required. The ground for the trial should be a firm compact turf, on a strongly adhesive soil, of the proper degree of moisture. To make the experiment complete, we would advise, that in addition to exactness in width and depth as near as may be, the preceding furrow be so far removed from the unplowed land, that a board or plank of the required length and width can be laid down to receive the entire furrow as it is turned over, and the *weight* of this mass would furnish a correction to any inaccuracy as to the width and depth of the furrows under trial.

Dynamometers.—We have seen none quite perfect thus far. We believe the correct principle is applied, but some more experience is required to perfect them. We hope another year will furnish us with such as are faultless. The price asked for such as we have seen, is about $15. We do not think it policy to lower the standard of value, but rather *to bring the merits of the instrument up to the price.* A dynamometer, properly applied, is a very important instrument, and may save thousands of bushels of provender annually to the members of every county Agricultural Society, and none should be without one.

Growing Wheat *in the Eastern States.*—We suggest for our eastern farmers, the propriety of applying to their land on which their wheat is sown, a plentiful supply of ashes. We believe it is the *alkali*, rather than the *lime*, that is requisite to mature and perfect good and abundant crops of this valuable grain. The addition of the straw to the land devoted to this crop, we also deem important. Shall we hear from some of them on this subject?

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

"Sheep on the Western Prairies."

GENT.—The article in your September No. under the above title, was the first one read by me, and it is of so much importance not only to the West but to the East also, that I wish to corroborate the statements of Mr. Murray, and add some of my own.

Sheep can now be purchased for even less than the price he names. The distance to drive, which is of some importance to a person who would like to look into the business, would be from 100 to 200 miles, and the best time to drive, directly after shearing, or about the middle of September.

There are hundreds of situations where a man might keep a thousand or two head of sheep for many years, without buying more than 40 acres of land, costing $50; and this merely for a home for the flock, as "Uncle Sam," the greatest landholder in the world, has no objection to our pasturing his big prairies. There are sundry such capital situations in this county, only 40 miles from Chicago. The cost of stocking such a business would be about thus:—

Forty acres of land,	$50
A comfortable log cabin, two rooms,	50
A fence, ten rails high, around the land, (which will keep out prairie wolves,) 6,400 rails—3 600 rails for yards, &c. making 10,000, delivered in fence,	100
A small stable for cow and horse,	25
Another small building, for store-house, &c.	25
A well of first rate water and pump,	30
1,000 sheep, delivered on the spot, at $1 each,	1,000

Any quantity of hay required at $1,50 a ton, delivered in the stack, and oats at 12½ cts. a bushel, or corn 16 cents. Board and wages about the same as mentioned by Mr. Murray, though I think that item would be a trifle lower, say $10 a month for wages, and board in a family on the premises would not cost over $1 a week. The item of salt costs $1,25 to $1,50 a barrel in Chicago, and 50 cents transportation: hauling the wool to Chicago 25 cts. a hundred pounds.

No doubt about the hogs destroying the snakes—if they do not eat them, as some doubt, they certainly eat the eggs. You give a wrong impression to those not well versed in the subject, when you say "land can be had for *government price*, say $1,25 to $4 an acre*" &c. Government land is always $1,25 an acre. Improved land can be bought of individuals from 3 to 10 dollars an acre, according to location and value of improvements; often it can be had for less than the improvements cost; such is the condition of those now in debt.

The natural grass of the prairie it is no wonder that Mr. Murray prefers, because it is, either green or dry, better for sheep than the best of timothy, and the sheep also prefer it. There are a great many weeds which they are very fond of. His plan of seeding prairies is a good one. The picket fence mentioned, though not a very expensive one, is not necessary.

The cost of breaking prairie, although it seems low, is neverthless not so low by 25 cents an acre as it can be done in this county. If I was going to cultivate prairie for sheep, I should sow a good deal of rye for winter pasture, and save a great deal of hay.

If I was breaking sod in June and July for wheat, I would plow five inches deep and no matter how wide, say 20 or 24 inches, and be careful to lay every furrow flat over; this gives a good quantity of loose earth to harrow in the wheat upon, and by the next spring after the wheat comes off, it will plow up tolerably easy, though not mellow; it will take two years to rot.

If I was plowing in August to plant in the spring on the sod with corn, 2 1-2 or 3 inches would do well; the sod will rot sooner than when plowed deeper. If I was plowing in the spring to sow oats on the sod, I would plow 3 1-2 or 4 inches deep. The furrow slice should always be turned completely bottom up, and lay until rotten enough to harrow to pieces when plowed again, let that be longer or shorter, which will depend a good deal on the time of year it was broken. You must understand that a "sod crop of corn" is planted by dropping the seed in the furrow or by cutting holes in the sod to drop the seed in, and that it cannot be cultivated, as the top of the sod is as dry and hard as a side of sole leather.

On a sheep farm I should not adopt Mr. Murray's four course system. My plan would be to sow rye or oats and grass at every sowing—or turnips and grass occasionally, for fall feed. But it is not necessary here to have rich feed to fatten up the sheep previous to winter, for they are always fat.

* $4, was intended to express the price of *improved* land, which would save several of the items of building and fencing enumerated above.—ED'S.

In the article to which I allude, and in this, are many facts that ought to open the eyes of wool growers in the Eastern states, for if the business should be undertaken at the West exclusively, those who pasture upon land worth $100 an acre cannot compete with those that pasture upon land worth ten shillings an acre, and free from tax for five years.

I intend shortly to give you another article upon this subject and other things appertaining to the cultivation of the prairies of the great and growing West. I hope also to become more intimately acquainted with your readers the coming winter. In the mean time I am yours and their friend,

SOLON ROBINSON.

Lake C. H. Sept., 1842.

We are pleased to hear from our old friend again, and on so interesting a subject to American farmers and manufacturers as the above, and hope for the punctual fulfilment of his promise, as a subsequent correspondent. We have been a little apprehensive from his long silence on agricultural matters, that he had taken to politics or some other fashionable pursuit, or was lost in a cane-brake; or mayhap, had taken a bear prisoner, as the Irishman took the six grenadiers, who proved themselves such undisciplined captives, that they not only would'nt go at Pat's bidding, but even prevented the doughty hero's going himself. But at all events, we are rejoiced at his appearance among the farmers again *in these settlements*. We can assure him that we shall look to him for *the latest and most important information* FROM THE PRAIRIES.

For the American Agriculturist.

Long and Short Manure.

GENT.—The question of long and short manure is of too much importance to remain unsettled, as I apprehend it does, at present, each having its advocates for strength and durability in its effects upon land and crops; and we want experimental writers to determine this point. There are many questions asked, where there is one answer given founded upon experience. Questions ought to be asked it is true, and they ought also to be answered; but it frequently happens that many months elapse before they can be answered by actual experiment, during which time they are either forgotten or neglected. But to my starting point. The lot which I am now cultivating contains about three acres, to manure which, I had access to three heaps—the first the produce of ten hogs, fed under cover and littered with straw, the manure being thrown out with the straw, as this became unfit for further use; the second heap was from the stables and barnyards, where the manure had been thrown during the winter with the litter, as I always bed both cattle and horses; the third was from a barn-yard at a distance, where the manure had been suffered to collect and rot for three or four years in a very slovenly and unthrifty-like manner. The whole was spread on the ground before planting, taking care to plow it in as soon as it was carted on and spread. I don't think there was much difference in the quantity carried on to each section, if so it was accidental, not intentional. The ground was then plowed, leaving a dead furrow between each land, and as it was a stiff clay soil, it became necessary to roll it before any thing further could be advantageously done; after rolling, it was thoroughly harrowed, and again plowed, then rolled, then harrowed; by this time much loose straw and coarse manure appeared on the top. This was carefully raked off into the dead furrows and again rolled, then planted with sugar beet, twenty-two inches between the rows, and during the months of July and August they were thinned out and fed to hogs, intending to leave them standing eight inches apart in the rows; but through the inexperience of the hands who sowed and thinned them, they will vary some from this distance. I should think, from my own experience, eight inches between the plants which are intended for maturity, twenty-two inches between the rows, if to be cultivated with the hoe, is about right; but if with the cultivator, plow and harrow, two and a half feet is near enough. I make the following estimate of the crop, including what has already been fed out to hogs:—from the old manure 800 bushels per acre; from the stable manure 1000, and from the hog manure 1200, or in this proportion. Whether they yield more or less, it is the strength and efficacy of the manure to which I wish to call public attention, and more especially to the difference between green or fresh manure and that which has been fermented and left exposed to sun, wind and rains. Upon the coarse manure and straw raked from the beet bed into the deep furrow, I planted potatoes and turned a furrow from the beet bed each side upon them, breaking the lumps of earth, (clay,) and levelling with the hoe; this was all the tillage they have received except pulling out the weeds by hand, they being covered deep and planted with small pieces of from one to three eyes each.

Thus— . . . . . .
. . . . . .

each piece eight inches from its fellow. Larger ones I have seldom seen, and there is every appearance of a good yield. Let this question of long and short manure be settled.

It is my opinion that the sooner it is spread upon the earth after it is dropped from the animal the better. I have tried it upon a piece of grass land the two past years, and from land which in 1840 bore comparatively nothing, I have this year cut 2 1-2 tons hay per acre, by manuring it highly in 1841 and 1842 with that which came fresh from the the stable, and was put upon the land in the month of March. I have nothing to say against the age of manure kept under cover and from the air. I believe the longer it is kept the better, even until it turns to saltpetre; with this too I have had some experience, and know something of its great power to stimulate vegetation.

Very respectfully, yours,

October, 1842. INQUIRER.

Michael L. Sullivant, Esq. of Columbus, Ohio, writes us, that he has just finished curing a good crop of 40 acres of hemp, it being the first attempt at raising it in that vicinity. He also adds—"We are much in the spirit of making manure, since reading Johnstone's Agricultural Chimistry, and Dana's Muck Manuel." This is certainly a rare thing for a gentleman to assert who is cultivating the fertile bottoms of the Sciota. We can remember when any person would have been laughed at, upon the slightest supposition of it ever being necessary to enrich the soil in that section of the country, and many of the farmers there still believe manure a great incumbrance and would feel grateful to any one who would take the pains to cart it from their premises. But not so with Mr. Sullivant. He finds from actual experience, that a continual cropping of these fertile bottoms does very gradually exhaust them, and we recollect when we last visited him, of seeing all his manure carefully husbanded in the yards, and carted out to his rich meadows before breaking them up for corn, and of the good effects of this system, we have no doubt the succeeding crops have told a good tale.

We shall be happy to hear of Mr. J. Sullivant's experiments in making sugar from corn stalks, and trust that they will be soon forwarded us for publication.

Another article on the prairie grasses of Ohio we have been confidently looking for, from a correspondent, and are sure our readers and the public will be much benefited by its appearance.

PLAN OF A BEE HIVE.

FIG. 1.

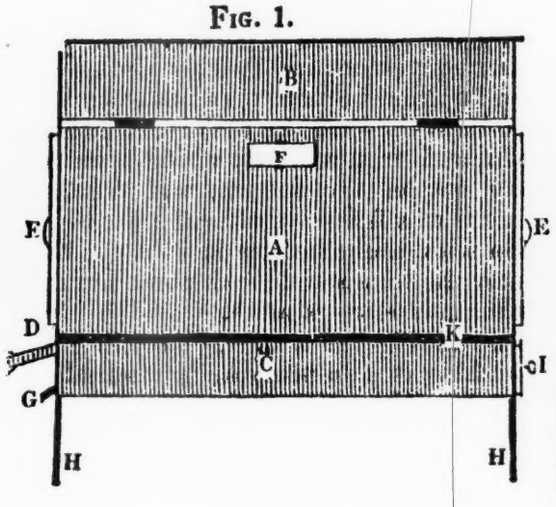


FIG. 2.

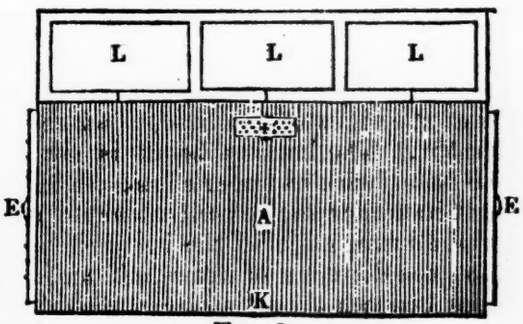
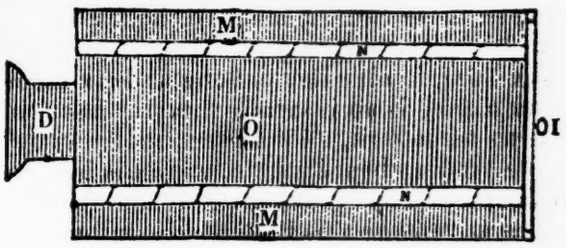


FIG. 3.



For the American Agriculturist.

GENT.—Enclosed I send you a drawing of a bee-hive; it is now in full operation, and to all appearance, is the very article that has been so long desired, and if you think it worthy, you will confer a favor by giving it a place in your very valuable periodical.

I call it the CONVENIENT BEE-HIVE, and shall describe it as follows: Fig. 1 represents a side view of the hive as it stands in the apiary; fig. 2, the top or main body of the hive when removed from the base; fig. 3, the base, giving an inside view, when the body of the hive is removed.

The letter *a*, represents the side of the body of the hive; *b*, the door inclosing the

drawers; *c*, the side of the base; *d*, the spout at the end of the base; *e*, the doors at the ends of the hive, with a glass eight inches square set in each door; *f*, the ventilator, which is a piece of tin punched full of holes, closed in fig. 1, open in fig. 2; *g*, the plug in the end of the base, which, when drawn, gives an outlet to the bees that get down into the drawer; *h*, the legs of the base; *i*, the drawer in the end of the base; *k*, the wooden band that surrounds the lower edge of the body of the hive, the object of which is, to give security when the two are united; *l*, the drawers above for the reception of honey; *m*, the inclined board; *n*, the vacancy between the inclined and landing boards. Those small marks represent cross sticks, extending from one board to the other, which are intended for the bees to cross upon; *o*, the landing board.

The hive as it stands in the apiary, is three feet eight inches high; the main body of which is two feet in length, fourteen inches in width, and fourteen inches in depth in the clear; above which, the drawers are placed as is seen in fig. 2, being three on a side. The front end of each drawer is filled with glass, so that the apiarian may at all times see what his laborers are doing. The base is of the same length and width of the body of the hive, and four or five inches in depth, and contains the inclined boards, landing boards, and drawers. These inclined boards are from two and a half to three inches in width, and are placed at the upper and inner edge of the sides of the base, at an angle of about 45°. The landing board is set down in the base, (with its upper edge rounded off,) so that its under surface will come on a level with the lower edge of the inclined boards, and at the distance of from half an inch to an inch beneath these, is placed the drawers. The space as represented by the letter *n*, between these boards, is about half an inch in width. The spout projecting at the end of the base, is nine inches long and six inches wide, and is so inserted that the bees, in passing through it, will pass immediately upon the landing board within, which is intended for them to play upon.

The advantage this hive possesses over all others that I have seen, I conceive to be this: First, the facility with which bees may be hived in it, which (by lifting the body from off the base,) is as easily done as the hiving in the old fashioned box or gum hive—and then, so soon as the bees shall have entered their new habitation, (which will require but a few minutes,) it may be set upon the base, and by stopping the spout and putting in the plug, may be immediately carried to its place in the apiary. The second is, in there being a slat partition, running crosswise through the centre of the body of the hive, and extending from top to bottom. The object of which is, to be a guide to the apiarian, in the removing of honey; which, after the hive is once filled, should be alternately removed to this partition annually. The doors being large, this can be easily done by driving the bees to the opposite side of the partition.

The third and last, though not least, is in the construction of the base, which contains the inclined boards, the landing or bottom board, and the drawer, (which contains a tin ventilator six or eight inches square,) which at all times gives the bees such complete victory over the worms, when once they come or are thrown down into the drawer, that the apiarian, if he will attend to his duty as well as the bees will attend to theirs, will be enabled to destroy at least ninety-nine worms out of every hundred that may ever infest his hives. And this, I presume, will be admitted by all, to be quite a preventive in the future breeding of worms. This I conceive to be a decided advantage over all the other hives in use, as in their construction, the worms (if there ever happens to be any, and I presume they may be found more or less at times in all hives,) are cast out upon the ground, and then permitted to crawl to some convenient and suitable place, and there wind up in a cocoon, then in the course of a few days they will be converted into a chrysalis, and then a miller, which soon eats its way out of the cocoon, and then, in the course of a few days after the act of copulation with the male, are in a fit condition to enter the hive and deposit some hundreds or thousands of eggs more.

By killing the worms, you will not have anything like so many *millers* to molest your hives. All I ask of the community is, (if my description has been sufficiently intelligible,) to try the hive, and I think they will agree with me in calling it a *convenient bee-hive.*

M. H. Keever.

Ridgeville, Warren Co., Ohio,
August 22d, 1842.

To Correspondents.—The communication of Mr. C. Bement, and several others, containing a description of Agricultural Fairs which have been held this fall, will appear in our next.

In a recent letter from Judge Beatty, authorizing the publication of the following valuable essay, which he designs shall constitute a part of his forth-coming work, he says in an excursion lately made in different parts of the country, he has found additional and valuable information on this subject, which he will embody in the article before going to press. He will also add an essay on the grazing and feeding of cattle in Kentucky, which is much needed for that region. The subject having had little attention thus far, has not hitherto been reduced to *a system* by their most experienced graziers.

An Essay on the Cultivation of the Black or Yellow Locust.

BY JUDGE BEATTY, OF KENTUCKY.

The rapid growth and great durability of the black locust; the ease with which it is cultivated; the small space of ground necessary for the purpose; and its adaptation for fencing and other valuable uses, render its cultivation of the highest importance. It will be of peculiar value to those portions of the great West, in which prairies are so much more extensive than wood land.

It may be propagated from the seed, or by suffering the sprouts to spring up in places where locust trees have been cut down. The latter mode of raising the locust is attended with the least trouble, and it has the advantage of bringing them forward somewhat earlier than where they are propagated from the seed. But as they can be reared in this way only where the locust already exists, the other method must necessarily be resorted to, where circumstances will not admit of their being cultivated by suffering sprouts to spring up from the roots of those which have been cut down. Both modes of cultivating them will be explained in this essay.

In a country in which the locust already exists, the following method may be adopted. Select a convenient piece of ground, or separate and distinct pieces, on various parts of the plantation, where locusts are growing not too wide asunder. Let all other timber, except the locusts, be cut down, and the ground carefully cleared and cultivated, during the summer, so as to suffer no weeds to go to seed. Hemp, tobacco, pumpkins, &c. would be convenient crops for the purpose. After these crops are removed in the fall, let the ground be plowed, and harrowed, and brushed, so as to leave a smooth surface. About the middle of February,* it should be sowed with red clover, one gallon to the acre, and about the middle of March all the locust trees should be cut down, and the brush and timber removed or burnt. In order to prevent any weeds from growing among the clover, one bushel of *small oats* to the acre, (not more,) might be sowed on the ground about the middle of March, without brushing or harrowing it in. By sowing the oats thin, and one month after the clover, the latter would get a good start, and be less liable to be smothered. Nothing more would be necessary but to enclose the ground with a good fence, so as to protect the young locusts from stock. If the ground is new or very rich, the sowing of the oats may be dispensed with, as by growing rank and falling down thay might injure the young locusts. Besides, new ground or grass land is not apt to be infested with weeds, and therefore the clover would not need to be protected from them. When locusts are cut down in the spring, say about the 15th of March,† (in latitude 39°,) and the ground is prepared, as above directed, a large number of young locusts will spring up among the clover and oats, and will grow with tall and straight bodies. Standing thick, they will be prevented from branching, and require no trimming, nor any other attention, except to keep a geod fence around them until they are so large as not to be liable to injury from stock. Cattle are very fond of browsing upon the leaves and tender branches of the locust, in the spring of the year, and will bend them down, even when they are of considerable size, to get at them. This would prove utterly destructive, and should be carefully guarded against. Indeed, it would be better to keep all stock off the ground, even when the locusts are of considerable size, as this would preserve the ground in a light state, and cause thew to grow much more rapidly. In process of time the unthrifty locusts will be overtopped by those of more vigorous growth, and will die. In this way they will gradually thin themselves. After some years, many of the less thrifty ones, when large enough for stakes, may be cut down for that purpose, and then more room will be left for the others.

Locusts are very subject to be injured by an insect that penetrates the bark, making large holes into the wood of the tree, which greatly injures them. All that are much injured will fall behind, and become *under lings;* but among the great number that will spring from the roots of the old growth, enough will escape serious injury to cover the ground with as many as can grow to advantage. These will flourish and come to perfection, while the unthrifty ones may, from time to time, be cut out for stakes, and riders for fencing.

I have now growing twelve or fifteen hundred locusts, from 15 to 25 years old, reared as herein described, from among which I have had several thousand stakes and riders cut. The balance have grown up tall, and without branching, and promise well for rail timber, but have not grown as rapidly as they should have done, in consequence of the ground being set with blue grass, and pastured with large stock.

Locusts, cultivated as herein directed, may stand, upon an average, within ten feet of each other, and will, in the course of twenty-five or thirty years, attain a size sufficient to produce twenty-five rails each. Standing at the above distance, an acre of ground would contain 435 trees. But suppose, from various calamities, such as standing irregularly, dying, &c., only 300 should attain a size sufficient to average twenty-five rails. At this rate, each acre would produce 7,500 rails, besides stakes enough from the branches for staking the fence made with the rails, say 1,500. Thus ten acres of land, set in locusts, would, in about twenty-five years, yield 75,000 rails, and 1,500 stakes, sufficient to make 7,500 pannels. If the whole of these were cut down, at the end of twenty-five years, the sprouts growing from the old roots, if protected from stock, would produce more than as many more rails and stakes, by the time the fence would require to be renewed.

Thus it will be seen that only ten acres of land would be necessary, to produce rail timber enough to fence in a large plantation.

It may happen that in the place selected, the old locusts may not stand so regular as to fill the whole space with young growth. In that case, the open places might be mowed for hay, but where the locusts stand thick, the clover and oats should be left undisturbed. The clover, growing up annually and falling down, will keep the ground light and rich, and cause the locusts to grow rapidly. After four or five years, when, perhaps, blue grass may, in part, have taken the place of clover, calves and other young stock might

* This is intended for the latitude of Kentucky.

† I have found, when locusts are cut in the fall or winter, that they put up but few sprouts.

be suffered to run among the locusts, in the winter time, but should be removed before the frost leaves the ground, with a view of keeping the ground as light as possible. If a plantation should afford no convenient place, upon which a sufficient number of old locust trees stand, to cultivate locusts upon the plan herein explained, then the following system is recommended. "Let a piece of ground be selected, or more than one, (if more convenient,) so situated as to afford the greatest possible facilities for approaching it from all parts of the plantation, say ten acres, and let it be prepared, in all respects as recommended, except that it may be sowed with timothy instead of clover, if more convenient, and either in the fall or spring, as may suit best. In the spring, after the grass has been sowed, plant the whole of the ground with black locusts. The trees planted should be of thrifty growth, and from three to six years old. They should not be planted early in the spring, as is frequently done, for of those, so planted, a large proportion will die. The proper time to plant them, is after the buds shall have so much swollen as that the leaves will begin to be plainly visible. This usually happens about the middle of April—sometimes not till the first of May. In digging the young locusts for planting, care should be taken not to bruise the roots. To avoid this a sharp axe should be used to cut off the larger roots, and all that are bruised should be carefully trimmed with a sharp knife. The lateral branches should be cut off, leaving only a small part of the top. They should be set firmly in the ground, but not more than an inch or two deeper than they naturally grew. The holes should be dug wide, so as to admit the roots to take their proper position, taking care not to double or bend them. It is best to plant after a rain, and the operation had better be delayed till the first leaves are from a quarter to half an inch long, rather than plant without rain. The trees should be planted thirty feet apart, each way, which will give about forty eight to the acre, or more accurately, four hundred and eighty four to ten acres. If any should die, their places should be supplied the next spring, and at that time several shovels full of chip manure, not much rotted, should be put around each tree. This will keep the grass from binding the young trees, and hasten their growth. The ground, thus planted out, may be kept for meadow four or five years; or somewhat longer, if the trees shall not have grown thriftily. The ground should now be plowed, in the fall of the year, and cultivated carefully for the two succeeding years, so as to destroy the grass. About the middle of the ensuing February, it should be sowed with clover and oats, as herein-before directed, the ground having been previously properly prepared for the purpose. About the first of April all the locusts should be cut down, the timber removed, and the brush burnt; and now nothing remains to be done but to pursue the directions, in relation to locusts springing up from the stumps and roots of old trees.

To carry out this plan of rearing locusts will require time, and the exercise of patience. But it must be recollected, that during the time the husbandman is waiting for his young locusts to attain a sufficient age to be cut down, he will be annually deriving profitable crops from his land; and, at the end of the process, he will obtain a sufficient number of stakes, and poles for riders, to compensate for all his extra labor. And besides, he will have his ground more regularly set with locusts than could be accomplished in any other way. The roots of locusts extend out laterally to a considerable distance, and sprouts will spring up, sufficiently thick, over the whole ten acres, and stand more regularly than if reared upon the plan before suggested.

But neither of the foregoing methods of cultivating locusts will be practicable in a country where no locusts grow naturally, and hence the necessity of rearing locusts from the seed, in such situations. This is quite practicable. New or second year's ground will answer best for this purpose. If there be none such, land which has been lying in grass for some years may be substituted. It should be prepared by plowing the preceding fall, and pulverising the soil as completely as possible. In this latitude, (39° north,) the seed should be planted late in April. If planted too early, the young locusts will sometimes be destroyed by frost. They are not as tender as beans, but a pretty severe frost will kill them. The earlier they are planted the better, so that they are not endangered by severe frosts. The time of planting must, therefore, be governed by the latitude, and danger of frosts at the place of planting them. When the ground is properly pulverized, it should be checked off, five feet each way. The seed must be dropped and covered like corn, except that it should not be covered more than an inch, or inch and a half deep; and care should be taken to cover them with a light mould.

The seed must be thus prepared for planting: They should be gathered the preceding fall, and kept dry till spring.* Three days before the time of planting, they should be put in a tight vessel, and boiling water poured on them, which should be suffered to remain twenty-four hours; it should then be poured off, and the boiling water renewed, and suffered to remain the same time; boiling water should again be poured on the seed for a third time, and continued as in the two first instances. Most of the seeds will now have burst the hard envelope by which the kernel is surrounded, and they will be in a proper condition to be planted.† Eight or ten seeds may be dropped in a hill to increase the chances of producing at least three plants, but they should be somewhat scattered, to prevent them from being too much crowded, in case many should come up. To facilitate the dropping of the seed, they should be stirred in sifted ashes or gypsum to dry them, and then all the surplus ashes or gypsum sifted out.

Locusts should be cultivated the first year with great care, suffering no weeds to grow, and thinning them so as not to leave more than two or three stalks to a hill. The ground should be left as level as possible, at the close of the cultivation in the fall, and sowed in oats and clover seed in the spring, as hereinbefore directed. Nothing more will be necessary but to protect them from stock, and to thin them out as it shall become necessary.

If planted five feet apart, each ten feet square will contain four hills, and twelve young trees, if three grow in a hill. This will be twelve times as many as will ultimately grow on the ground, allowing one hundred square feet to each tree. It will, therefore, soon become necessary to thin them, and in the course of two years they should be gradually reduced so as to leave but one in each hill, taking care always to leave the straight and most thrifty plants. The balance may be permitted to stand until the more thrifty ones so far overtop the others, as to leave no doubt that they have not suffered so much from insects as the others. By this time many of the young trees will have attained a

* I apprehend seed of any age will answer if it has been kept dry, but I have had no experience on this subject.

† This severe exposure to boiling water may induce an apprehension, that the vegetating power of the seed will be destroyed. Experience has satisfied me, that such apprehensions will be groundless. It only prepares the seed for vegetating quickly, and certainly.

sufficient size for stakes, and the less thrifty ones may be cut for that purpose, taking care to leave the most thrifty *one* growing upon each ten feet square, as nearly as practicable.

When these shall have attained a sufficient size for rails, say in twenty-five or thirty years, all should be cut down—large and small—as they are needed, *on one side or end of the field*, so that the sprouts may grow from the stumps and roots without being overshadowed by trees left standing. As soon as a part of the old trees are cut and removed, a new crop of locusts will commence growing, and by the time the whole shall have been cut, the plantation will be fenced with rails, which will last from thirty to fifty years. By the time the fencing will require renewing, a second crop of locusts will have grown, that will produce more rails than the first, and thus a permanent supply of rail timber will be afforded from a few acres of ground.

The following estimate will give some idea of the profits arising from the cultivation of the locust. The value of rails, made of the ordinary rail timber, of the better kinds, in the rich lands of Kentucky, may be estimated at three dollars per hundred. Locust rails will last more than twice as long, and consequently may be estimated to be worth at least six dollars per hundred. Three hundred rails, growing upon one acre, will, at the expiration of twenty-five or thirty years, produce seven thousand five hundred rails, and be worth four hundred and fifty dollars. Estimating the rent at three dollars per acre, for thirty years, will be ninety dollars. Allowing the pasturage of the ground, and stakes cut from among the growing locusts, and the branches of those cut down for rails to be a compensation for the trouble of rearing and protecting the locusts, (a very liberal allowance,) and we shall have a clear profit of three hundred and sixty dollars per acre. To this should be added the saving of labor in making and repairing fences with rails of such great durability, compared with the expense of keeping up fences with rails that will last only fourteen to twenty years.

But this is not all. In the fertile parts of Kentucky, where good rail timber is not abundant, it is necessary to keep one-third of a moderate sized farm in woods, to supply rail timber and fuel. A few acres, planted in locusts, after they shall have attained a suitable age, will supercede the necessity of keeping more woodland than will answer for fuel. A large portion of what now lies in forests may, therefore, be converted into arable land, and thus the profit of the farm may be considerably increased.

A Correspondent from Louisiana asks: "Is there no way for destroying the coco nut grass? for by its introduction among us, large fields of some of the best parts of our plantations here become entirely valueless, and are now thrown out of cultivation." During our late trip on the Mississippi, we heard considerable conversation upon the subject, and finally suggested that as swine were very fond of the nuts of this grass, they should be kept in large herds to root it out. Since this, we understand our advice had been anticipated by the practice of several planters for the past two or three years. But Dr. Cartwright, in his admirable letter published in the Oct. No. of this paper, p. 215, speaks of two kinds of the cocoa; the sweet and the bitter. It is the sweet, doubtless, of which the swine are so fond, and as Dr. C. says: "No means have been discovered of extirpating this pernicious repent when it once gets fixed in the soil," we suppose the pigs eschew the bitter and take only to the sweet. Will Dr. Cartwright, or any of our friends at the south, add to their favors, by answering our correspondent, for if swine will not eradicate it, we can hardly divine what will, on account of the great depth of its roots and their tenacity of life. This is a most important subject for an extensive section of the South and well worthy the investigation of the observing and intelligent.

Exchange Papers.—We have received within a short time, numerous applications to exchange with newspapers. This is a losing exchange for us, not from any want of merit in the papers sent, but from the matter they contain not being of use for our own paper.

We shall be most happy, however, to comply with those requests in all cases, although our list is already large, and we suggest a way by which it can be done with mutual advantage, and great benefit to the community. There are, as nearly as we can *guess*, and *guessing* is the only means for *estimating*, not to exceed 80,000 copies of *agricultural papers* circulated in the United States; and of these, at least one-fourth are taken as duplicates, which will reduce the number of subscribers, of these *invaluable farming papers*, to the low number of 60,000.

In our population of 17,000,000, we ought to have, at least, one eighth, or 2,000,000 subscribers, to some purely agricultural periodical. *The field then is not one thirtieth occupied.* This statement suggests the mode of a mutually beneficial exchange. Let each one of our Editorial brethren procure for us as many subscribers as possible, from one to twenty, or, a hundred will be more satisfactory, deduct the commission allowed, and remit us the money through the post office. By this simple process, he will "do the state some service," and "put money in our purse," both reader's and editor's, but the Lion's share, will go to the farmer's.

We have received two letters from Thomas Bates, Esq., of Kirkleavington, England, together with the packages of papers. We make some extracts from the former.

"I sent nothing to Bristol this year, (meaning animals for exhibition at the annual meeting of the Royal Ag. Society,) the distance being so great. The show of Short Horns there, was indifferent. The Devons were numerous and good, Herefords also, and Long Horns, the best show that has yet been of all those tribes. The meeting went off finely, and the American Ambassador was enthusiastically received, and acquitted himself well. It was indeed a mutual congratulation, and must give great satisfaction to your country as well as this.

"In this paper (the London New Farmer's Journal,) also will be a full account of the York Show, on Wednesday last, by far the largest show of any in England, and the animals made up most extravagantly. I sent the Duke of Northumberland there, and his dam Duchess 34th. He is the eldest of her eight calves, and she herself only nine years old, and has passed through more casualties than any animal I ever knew, (had a leg broken at two years old, and other accidents subsequently,) and yet the judges could not get over giving her and her son the highest premiums, as the best bull and best cow. Mr. Booth's cow, that got the premium at Bristol, was placed second. She was sister to the one shown at Liverpool and Hull, last year, and was also at Berwick; the cow of last year was also at the show yard at York."

Several English correspondents we replied to, privately, by last steamship, and have since executed their orders.

The letter and cut from George Vail, Esq. was received after our matter was made up. It will appear in our next.

BOY'S DEPARTMENT.

"All work and no play, makes Jack a dull boy," is a homely adage, but a good one. A most estimable and energetic clergyman, himself a self made man, and the successful tutor of some of the most efficient public men now in active life, used frequently to say, on the exposure of some of the mischievous tricks his graceless students were constantly plotting, "it was the hardest thing in the world, to put a man's head on a boy's shoulders;" if it could have been accomplished, it would have proved the most foolish; for it's very likely the head and shoulders would have changed places at manhood. To adapt the occupation to the capacity, both of mind and body, is the only true science, in the education of youth of both sexes, and all conditions. There is an instinct and nature, inbred and inherent, in every human being, and to mature and bring out this seminal principle to its fullest capacity, it is not necessary to thwart nature, but to guide it; not to engraft new and unknown elements of character, but to draw out and mature, discipline and direct, such as are already implanted. With each and every one of them, there is the germ both of good, and evil, and the ornament or disgrace they are to prove to their race, depends as to which of these opposing principles predominates. We daily witness, from apparently the same original materials, but subsequently subject to different influences, the most opposite results of character; the most exemplary, wise and good on one side, and the most profligate, depraved and hardened on the other; saint and devil issuing from the same stock, and maturing their most luxuriant fruit from the same soil. We deem it not among the unimportant matters of good husbandry, that some rational employment be afforded the young folks, suited to their dignity and importance, and calculated to awaken their zeal and elicit their genius; and while the parent is employed with the improvement of his cattle, and horses, and sheep, and swine; and applying the principles of Tull and Davy and Liebig to his tillage and crops; he must give the boys something to bring out the resources of their young minds. And if he can't find something to interest and improve them, they will either stultify or deteriorate; the last being altogether the most probable result, for evil influences are always sufficiently abundant to enlist the idle urchins that are waiting for employment. Standing still with any reasonable degree of intelligence, is out of the question, when once on the track of life, the being must go forward to fulfil its destiny. The course to be followed out is frequently determined in childhood. How important then to give this the right bias. The slightest, almost imperceptible divergence of the curve, if pursued gradually, leads to a course directly opposite from the starting point.

To implant in the breasts of our young readers, some of the fascinations of the pursuit of nature in her varied operations, we shall occasionally give them a field of their own to occupy, and to begin with, shall offer them some choice directions for selecting, rearing and managing the various breeds of pigeons. And we must insist, that in this, the boys shall have pretty much their own way. The parent may advise occasionally, but not direct. Let the youngsters have all the responsibility, and our word for it, if they have a fair field, they will hereafter prove troublesome competitors on your own ground whether it be Short Horns or South Downs, or whatever your hobby happens to be. Billy Gray claimed as much merit for drumming well while a lad, as for his conspicuous success as a merchant in mature life, and the mother of Washington, in reply to the eulogium of Lafayette on the splendid career of her soldier son, said very meekly but comprehensively, "ah, George was always a good boy."

Cobbet says, "It is not supposed that there could be much profit attached to pigeons; but they are of this use. They are very pretty creatures; very interesting in their manners; they are an object to delight children, and to give them the early habit of fondness for animals and of setting a value on them, which, as I have often had to observe before, is a very great thing."

The Stock Dove, or original of the pigeon genus, according to Buffon, in its natural or wild state, is thus described: "with a fine neck of a reddish gold color, its wings marked with two black bars, one on the quill feathers, and the other on the covert; the back white, and the tail barred near the end with black." The Ring Dove is yet held by naturalists to be distinct from the Stock Dove, and it would seem that the Turtle Dove is equally so from both. In this country the Blue Dove (house pigeon) is the most common, and the only species of these are the Ring Doves, or wood pigeons, and the Turtle Doves, which are to be found in all parts of Southern Britain, breeding during the spring and summer, and retiring to the deepest recesses of the woods in the winter season, whence, probably, the Turtle has been supposed to emigrate. I am assured by a Spanish gentleman, that in Barbary they have pigeons equal in size to fowls, but incapable of flight.

Throughout the woods and plantations on the domain of Warwick Castle, the Turtle Dove abounds in multitudes, flying in pairs, and lighting on the turrets of the castle. Their loud and mournful cooing is heard on the road at a considerable distance. Much pains have been taken, hitherto ineffectually, to reduce their numbers.

Both in the ancient and modern world this beautiful and variegated genus of birds has been cherished by man as a source of amusement and gratification to the eye, as well as profit, in the article of provision for the table. Besides it was reckoned by certain nations of antiquity unlawful to deprive them of life. The useful qualification of Messenger, appertaining to the Asiatic and African species of the pigeon, is of great antiquity: and we read, in the time of the Crusades, of an Arabian prince who had a sort of telegraphic communication kept up in his dominions through the medium of pigeons, that carried letters, and were regularly relieved at appointed posts. From these, doubtless, the breed celebrated in Europe under the name of the Carrier has proceeded. In modern times, those varieties which are kept for the purpose of amusement and show, are styled Fancy Breeds, and they form a distinct article of commerce in cities and great towns, the varieties, as they chance to be in fashion, bringing a considerable price. From the earliest times the pigeon fanciers of London have had a club, in which premiums are awarded, and the notable science of the fancy, through the method of crossing colors and forms, is promoted and perpetuated. The chief objects of the fancy have hitherto been those varieties styled Almond (probably ermine,) Tumblers, Carriers, and the birds with great crops, the most fashionable variety of which is the Pouting Horseman. The specific merits of these breeds are indicated by their names. The tumbler exercises his faculty in the air, but is chiefly valued for his peculiar form and variegated plumage. The Carrier, as a messenger, cuts the air with almost inconceivable swiftness. This is the columba tabellaria, the famous carrier, or messenger, between Aleppo and Alexandria in Egypt. The Pouter extends his crop to a size attractive to curiosity, and by his grotesque attitudes and familiarity with man, engages his attention.

It would be useless to assign a reason why one particular breed out of so many species should alone possess the peculiar knowledge and instinct of the Carrier. We must content ourselves without diving too far into the hidden mysteries of nature, and ascribe that wonderful facility to the same Power that guides the swallow and other birds of passage across the waters of the Atlantic to our shores, or conducts them, each succeeding spring, to the same spot where for previous seasons they have reared their young.

Tumblers by their flight are a source of great enjoyment to the fanciers, for in addition to their tumbling they will rise to so great a height in the air as to appear like a speck, or become altogether imperceptible. If of a good kind, and well familiarized to one another, they will in their flight keep in so close company that a dozen of them may be covered with a handkerchief. If the weather be fine and clear, they will keep upon the wing for four or five hours at a time, the favorite set seldom or never tumbling except when about to rise, or when coming down to pitch.

Tumblers show in their plumage an endless variegation of shade—reds, yellows, blues, duns, blacks, whites, and silvers. No expense should be spared at first for the purchase of two or more birds accustomed to very high flying, as they will be of infinite use afterwards, in teaching the young ones to be lofty soarers. After the pigeons have been accustomed to their habitations, they should be turned out only once a day in a clear grey morning, when there is neither mist nor wind, taking care to spread out for them on their return a plentiful repast of rape or canary seed, to entice them home, and afterwards shutting them up for the rest of the day. They should, for an obvious reason, be closely confined when with egg.

The Carrier was called by some of the old fanciers, the King of Pigeons. It is remarkable for the fleshy protuberance called the wattle on the lower part of the head. These triple properties have been enumerated as indicative of its excellence—three in the head, three in the eye, three in the wattle, and three in the beak. The head should be flat, straight, and long; the eye broad, circular, and uniform; the wattle broad across the beak, short from the head to the bill, and leaning forward; the beak long, straight, and thick. Pigeon jockeyship sometimes has attempted to imitate these qualities artificially, and to palm upon the inexperienced inferior birds at the price of the best. The length and thinness of the neck are marks of its elegance.

The *Horseman* is supposed to be a bastard between the Tumbler and Carrier; they are chiefly used at present for deciding bets, and carrying letters, the pure Carrier being so exceedingly scarce.

Dragoons were originally bred between the Horseman and Carrier; they are very strong and useful birds; being prolific breeders, and good nurses, they are frequently kept as feeders to rear young Pouters, Leghorn runts, &c. For a distance of fifteen or twenty miles, the Dragoon is said to be more rapid than the Horseman, but cannot keep up its superiority in a longer flight.

Toho, in the New Sporting Magazine for June, 1839, says:

"The first property of a Carrier is the length of their flight or wing feathers, and the distance or length from the base of the bill to the end, which should always taper gradually. The color is the next, and though fanciers disagree on this point, I prefer a blue to any other, as I have generally found them hardier and swifter than the blacks or duns, but, like dogs, good pigeons are to be found of all colors. Firmness of feather always indicates a good constitution. The age may be guessed by the size of the wattle, and the heavy appearance of the bird.

"The Antwerps are a later introduction into this country, and their name bespeaks their origin. I believe little was known of them before the famous Antwerp match in July, 1830, when 110 birds were tossed from the yard of a noted fancier in the Borough. The first bird reached Antwerp, a distance of 186 miles, in five hours and a half, and gained the gold medal; out of the 110, about 100 reached home. To the eye of any one who has been solely accustomed to the English Carrier, they possess but little recommendation, but the fancier soon detects the points of speed and beauty, in the fine and lengthy shape of the bird. They are of many colors, but I have found none better than the nearly reds and blues. This bird, in my opinion, is equal to the Horseman in sagacity and speed, and altogether, I prefer them to any other kind.

"The pigeon loft should always, if possible, face the west or south, be high and roomy, with railed pens to shut in birds for matching in the spring, or other purposes, kept well lime-washed, which will both destroy the insects, and keep it cool, and it should be repeatedly cleaned out. A glass tile or two in the roof, if it is a slanting one, will be useful to light the loft.

"There must be a railed trap projecting in front, so that the birds may go out from the loft, and the front of the trap will let down and pull up, by means of a spring inside. This is the dormer, and in most large lofts is out of the top of the roof. When the trap is shut, the birds will come in at the wires, which open inwards to the loft, on a pivot, which is called the bolting wire.

"After they have become well accustomed to the loft, and are able to keep pretty well with the flight, take them about half a mile from the loft in a bag made of coarse canvass, to hold two birds, with a little straw, and toss them; repeat the same distance for a few days, and gradually increase it up to five miles. After this they are pretty perfect, and two or three miles may be added to the distance every day. If your loft be near a high road, a great advantage will be found by giving the birds to the coachmen to toss. There are many ways of marking birds. I generally make a little notch in the beak or between the toes, in the same manner as game fowls. A little stamp with the initials of the name, to mark them in red on the tail and pinion feathers, will be useful till the birds moult. In tossing a bird, always clear its wings and feet, and holding it round the body and legs with one hand, throw it well up,—never near any trees, as the young ones will frequently perch and there remain.

"The speed of the Carrier has perhaps never been ascertained. I have had them come seven miles, by the *road*, in five minutes, and forty miles in the hour is generally done; but too much depends upon circumstances to give any opinion.

"If a bird is going to do a large distance, it should never be over-fed the night previous, but shut up in a dark pen. If possible, choose a clear day for tossing, for nothing beats pigeons like wind and fog. A real Carrier will seldom stop till he reaches home. If they are regularly flown, well fed and watered, and kept clean, few diseases will be known in the loft. Let them have a large tin pan to wash in, change the water every day, and a lump of salt to peck at.

"The canker in the wattle is their worst disease, and frequently arises from dirt or from the birds fighting. The best cure is a piece of bitter aloes of the size of a pea, given inwardly, and the day after wash the wattle with warm water, and in the evening wash the sore with lead ammoniac and burnt alum, mixed with lemon

juice, till cured. Tobacco smoke will be found useful to clear the loft from vermin.

"The *Pouter* is a very common but most interesting bird. It is remarkable for its local attachment, and although not a good breeder, and exceedingly apt to degenerate, it is very useful about the pigeon-house, by leading the other birds to form a stronger house and home. Some of them can distend their crops to a very great size, so much so as frequently to overbalance themselves. By judicious crossing and patient perseverance, some fanciers have brought these birds to so high a point of perfection as to sell them for twenty guineas a pair. They are very bad nurses, and it is difficult to rear their young without the aid of the Dragoon. When a Pouter has laid an egg at the same time with a Dragoon, they should be carefully transferred from the one to the other, it being necessary to allow the Pouter to sit, otherwise she would continue to lay, which in a short time would cause her emaciation and death. If bred in and in, they quickly degenerate and become worthless, new kinds must therefore be got by purchase or exchange, to prevent the deteriorating effects of too close a consanguineous connection. The contrary is the case with the Almond Tumbler, which, the more it is bred in and in, only diminishes in size, and is accordingly enhanced in beauty and value.

The *Fan-tail* is a very beautiful bird, sometimes, on account of its frequent tremulous movement of the neck, called the Broadtailed Shaker. When perfect, its tail consists of not less than twenty-four or more than thirty-six feathers, which it keeps spread and always erect, for if they are but for once allowed to drop, it is a fault never overlooked and never forgiven. A very slender-necked, full-breasted, and large-tailed bird, carrying the latter gracefully, is of very great value. The plumage is agreeably white, but there is also a great variety of colors.

The *Jacobine* is a bird very scarce, and difficult to be found of a good sort. It is sometimes called Jack, and is a very small bird. It has a range of inverted feathers on the back of the head, somewhat resembling in form the cowl of a monk, or the ruff of a cavalier, and hence its name. This range of feathers is called the hood—and the closer and more compact it grows to the head the greater is the value of the bird. The lower part of what is called the chain and the feathers that compass it, should be short and thick. There is a great variety of color among them, but the yellows always obtain precedence.

Besides these we have enumerated, an almost endless variety of names has been given to some where the shades of difference are very slight. With these the young pigeon-keeper should have as little to do as possible. Even with the commonest assortment he can buy at the market or from a companion, he will soon have a sufficient variety, and many to please his eye with sufficient beauty; and if it is necessary to assign them names, he can easily baptize them himself without consulting the vocabularies of the London fanciers.

Plucking *one* of the wings of old strangers to induce them to haunt or to prevent them from their vagabondizing propensities, sometimes manifested by old inmates, is better than cutting, as their power of flight comes on gradually as the feathers grow, and they become familiar with and fond of the features of the locality within a limited range of which they have thus been for a time confined. We have almost always seen this mode succeed in our own experience, although the reports of others all tend to the superiority of endeavoring to haunt young in preference to old birds, which is certainly surer and safer, but the other may also be tried, as the old ones may begin to breed as soon as their wing is grown, which only takes about a month, whereas six times that period must be waited for before eggs can be expected from the young ones. If a hen happens to be lost, it is seldom that the cock remains long behind,—but the very contrary happens with the loss of the cock. The hen sets out in search of a mate, and she will soon be seen wiling a male companion—widowed in all probability in some other dovecote—homeward to her own residence, where they speedily pair.

SELECTIONS.

A Brief Sketch of Robert Bakewell, Esq.

Memoirs of *utilitarians* are very seldom written. The quiet tenor of their lives, unlike the glare of that which sheds a halo around the heads of the warrior and the statesman, affords but little field for the display of the talent of the biographer: hence it is that the real benefactors of mankind are but too frequently passed over in silence, and we walk over the green sward that flourishes where the remains of those whose energies were devoted to the improvement of the race of animals, that contribute largely to add to the creature comforts of man, moulder into primitive dust, without even thinking that we tread on hallowed soil; for the earth beneath which a good man rests, is hallowed by the remembrance of his virtues and his usefulness.

Mr. Bakewell, who was the pride of the agriculturists of the last century, and justly celebrated for his improvements in the breeding of long-horned cattle and sheep, has been strangely neglected by those who ought to have been his warmest and most grateful advocates. But such is the way of the world: neglect, almost universally, is the reward of merit; and it is but too frequently the case that an *usurper* gains the prize, while the *real* utilitarian is thrown into the background of the picture. It is our wish to pay due honor to the memory of Mr. Bakewell, and, scanty as our materials are, we will endeavor to add one more laurel to the wreath which so justly encircled his brows; for

"He lived and died beloved, and deeply mourned" by a circle of friends who now, like him, are "food for worms."

The man who is the benefactor of the human race has a right to expect to live in the memories of posterity. Mr. Bakewell will do so, and although this tribute to his memory comes somewhat late, it will, at least, be appreciated as an offering at the shrine of honest merit.

Robert Bakewell was born at Dishley Grange, in Leicestershire, in 1726. The farm of Dishley Grange had long been in the possession of his ancestors, and those from whom he more immediately descended held the property on a lease of ninety-nine years from the family of Phillipps, of Garrendon; it having been purchased in 1693 by a Sir Ambrose Phillipps, by whom it was leased to the forefathers of Mr. Bakewell. The term of the lease expired very shortly before Mr. Bakewell's decease; and the farm, which consists of about 457 acres, then came into the occupation of his nephew, Mr. Honeybourne, who resided upon it until he died, which was about twenty years after the demise of his uncle. But with Mr. Bakewell, Dishley lost all its importance, and his successor failed in becoming even a shadow of the great practical man who had been its previous proprietor.

The Bakewell family would appear to have been

long settled at Dishley, as in the chancel of Dishley Chapel, where the remains of this celebrated man lie interred, are deposited the bodies of his father, Robert Bakewell, who died in 1773, in the 88th year of his age; and also that of another Robert Bakewell, probably his grandfather, who died in 1716, at the age of 73. Mr. Bakewell himself ended his valuable life on the 1st of October, 1795, at the age of 69—too early for "his country's good."

Perhaps, during the last century, no man did so much towards increasing the agricultural interests of the country as Mr. Bakewell. He was unwearied in his exertions, and enthusiastic in bringing to perfection his favorite pursuits. In every branch of the science he was persevering to the end; and by strenuous exertions made himself master of the different modes of cultivation pursued not only by the English farmers, but also those of Foreign cultivators. He did not content himself with the mere knowledge which he had thus laboriously and industriously obtained, but he introduced that system into his own farming practice which is now generally pursued in Leicestershire.* But the great glory which is attached to the name of Robert Bakewell is in the vast improvements which he made in the breed of cattle. The different nations of Europe supplied him with the materiel, and Nature herself might have wondered at the skill which he displayed in bringing her works to a greater degree of perfection. It was from Flanders that he principally procured his famous breed of black cart-horses, now nearly, if not quite extinct, which have been thus described. They were lighter-legged and flatter-boned than those now in use, but of great strength, more especially in their fore-quarters, with erect heads and fine crests. One of this breed was of such excessive beauty of proportions, that he was likened to the fancied war-horse of the German painters. He must indeed have been a splendid and picturesque animal, for a man of moderate height seemed to shrink under his fore-end, which rose so perfectly upright, that his ears stood, (a qualification that Mr. Bakewell deemed indispensible to the beauty of a horse,) perpendicularly over his fore-feet. This animal was the entire horse which Mr. Bakewell christened K,† and which was perhaps one of the most elegant creatures of his class that was ever bred within the British dominions.

Mr. Bakewell was allowed to be the first breeder of horses of the age in which he flourished; and King George the Third, who claims the honorable distinction of adding to his regal titles that of being THE FARMER'S FRIEND, particularly distinguished him by his notice and approbation. This conferred honor both on the Monarch and the subject, for it is unfortunately now too much the fashion to neglect the agricultural interests of the country. A horse which Mr. Bakewell submitted to the inspection of his Sovereign, and which was afterwards publicly shown for some months in London, was "the meanest of the breed;" yet its symmetry was beautiful, and its form not deficient in utility; it was, in fact, a picturable animal.

Mr. Bakewell had too much good sense to keep useless stock; he made even his mares work in the team, but they were treated as gently as a man would treat his wife, and the use of the whip was entirely prohibited at Dishley.* It is somewhat unfortunate that this fine breed should have been surperseded by a heavy-legged race whose movements are snail-paced, and decidedly inferior for agricultural purposes. Is there no one among our friends who would devote his attention to this important subject;

The pride of Mr. Bakewell was to improve the class of domestic animals, and his celebrity as a breeder of long-horned cattle will ever shed a halo over his name. It appears he selected the finest individuals of the Warwickshire species, principally from the herds of Mr. Webster, near Coventry, and Mr. Fowler, of Rolwright, which, being crossed with the most excellent of the Lancashire breed, produced a stock of cattle that was held in the highest estimation for a considerable time; but fashion varies, even with respect to animals, though the Dishley breed was kept up for some years after the death of Mr. Bakewell, by Mr. Paget, of Ibstock, Mr. Astley, of Addeston, and to a more recent period, by Mr. Huskisson, of South Croxton; though when a sale of the latter gentleman's stock took place, about thirty years after that of Mr. Paget's, there was a great depreciation in the intrinsic value of the cattle, although they were allowed to be some of the best and purest specimens of the Dishley herd. We cannot give a better proof of the value that was attached to this breed than to attach the prices a few of the lots fetched at the first day's sale of Mr. Paget's stock on the 14th of November, 1793:—

		Guineas.
Lot 8	Short-tail, by Shakspeare	38
9	Eyebright, by a bull bred by Mr. Varnam	51
14	Strawberry, by a Dishley bull	31
16	Brindled Eyebright	33
26	Penn	35
29	Young Dandy	30
30	Brindled Finch-Tidy	29

At this sale the famous bull, Shakspeare, which was bred by Mr. Fowler, by Shakspeare, *peré*, out of Young Nell, fetched 400 guineas, to which the seller appended the condition that he should have the privilege of having the use of him for two cows yearly. The heifers by this animal also sold well, one two-years old, realising 84 guineas, and another, one year older, 70 guineas. Mr. Bakewell preferred rearing small-boned cattle, and considered them to be in every way the most profitable, both to the farmer and the consumer. He also strongly recommended great attention being paid to the quality of the cows intended for breeders, and justly remarked that, when a sound discretion was not used, the produce often failed, and then the bull was frequently unjustly blamed. He was exceedingly particular in his own selections, and he prized his favourite bull, called Twopenny, so highly, that he refused 200*l.* for him; and he appears to have been somewhat choice of his produce,

* In Mr. Nichols's valuable work, "The History of Leicestershire," honorable mention is made of Mr. Bakewell. We are there told, at the time that work was compiled, that "he worked the drill and horse-hoe as they are now used; and the identical implement with which he drilled his grain and his turnips, was then used in the neighborhood, and by the same person who worked it upon Mr. Bakewell's farm in his life-time."

† Of this breed Mr. Bakewell used frequently to let out his entire horses for the season, for the sum of 150 guineas each.

* These mares were valued, about the year 1785, at 30*l.*, 40*l.*, and 50*l.*, each. The famous Corinthian Bulls, which are described as being wonderfully beautiful, and symmetrical in their proportions, are made to do all the heavy work on the rich land that is termed the *Terra Firma* of Italy. Their color is described as being, generally, a bluish roan; horns long, tapering off to a point, white as polished ivory, and finished with a bright black tip at the end.

for he rarely sold any of them, though he let them at high prices for the season.*

Celebrated and excellent as Mr. Bakewell's breeds of horses and cattle were, still more so was his breed of sheep. Perhaps at no period of time, certainly not in his, was such an improvement made in this valuable animal. In the present day cultivators of flowers are continually producing new species, but Mr. Bakewell was before-hand with them, for he may truly be said to have been the producer of a new variety of sheep. Combined efforts frequently produce great improvements; for practical men, by condensing their energies into one focus, may bring forward important results. But Mr. Bakewell's was a master-mind; his own skill and genius overcame obstacles that to others appeared to be insurmountable; and his long-woolled sheep became the pride of Leicestershire. It was entirely his own work, and the time he took to complete his wonderful improvement was incredibly short. In our day the South Downs have been brought to the highest state of perfection by Ellman, Grantham, Webb, the Duke of Richmond, and others, the superiority of whose flocks do honor to the agricultural interests of the country; but they were brought to this state of perfection by the union of several parties: Mr. Bakewell stood alone, and to him we are solely indebted for that beautiful and useful animal, the new Leicester sheep.

It was not on a sudden that Mr. Bakewell attained his high celebrity as a sheep-breeder. It is recorded of him that the first ram he let out he drove himself to Leicester fair, and obtained only 16s. for the use of him for the season. About 1760 his rams did not sell for more than from two to three guineas each, and after this time he did not receive for their hire more than from 15s. to a guinea per head. He now gradually advanced his terms, and in 1770 he let some of them for 25 guineas. Mr. Bakewell used to tell an anecdote respecting the difference of judgment in respect to the value of cattle. He was once attending Loughborough Tup-market, where he had a ram which he had let for 25 guineas. Soon after the agreement was concluded, another farmer offered to purchase the animal, and Mr. Bakewell jestingly fixed the price at 25s. The farmer considered this too much, and offered 18s., and eventually they parted for 2s. This was something on a par with the judgment of some Leicestershire farmers respecting a heifer which had been purchased for 80 guineas, and which they, a few days after-priced at 8*l*. This may be considered as the first dawning of his fame and fortune. The reputation and prices of his stock so rapidly increased, that in a very short time 400 guineas was given for the use of a ram for the season. One, called the Two-pounder, produced him in one season 800 guineas, besides the produce of his own ewes that were put to him, so it may be fairly calculated that the profits of the produce averaged him 1,200 guineas for one season.

The ardent mind of Mr. Bakewell was first brought into action about the middle of the last century, and from that time we may date the improvement of the Leicester sheep. About that period he engaged John Breedon for his head shepherd, and it appears that he soon became his confidant. There is little doubt that he entered actively into his master's plans, for he had the entire control over the formation of the new breed, under the direction of Mr. Bakewell, but they kept the manner in which it was accomplished a profound secret.* This seems somewhat strange, as Mr. Bakewell was a liberal minded man, and in after years the knowledge of his process might have been of essential service to his country. But his whole mind was devoted to the science in which he had engaged, and while he was practically working out his plans, it is probable that if any of his schemes proved failures, he wished them to be kept as secret as possible. In this he acted wisely, for too frequently the observations of "good natured friends" tend to damp the spirit, and check the energies of a man who risks his reputation on the success of his experiments. Hence it is that we are so little acquainted with the crosses he used to form his beautiful flock. Conjectures have been various: some have considered that the principal crosses he made were between the old long-woolled Leicesters, and the ill-formed animal that in those days fed upon the grassy hills of Chorwood forest; but, after all, conjecture is not proof. It may be taken as a fact denying dispute, that all his crosses were made from the best individuals of the different flocks, and these he in all probability, crossed again with some of another breed. His great object was to gain the greatest weight of meat upon the smallest quantity of bone, and to combine this with symmetry of form, early maturity, fine quality of flesh and a propensity to fatten. Some breeders consider the size of the animal to be too small, but Mr. Bakewell's opinion was, that a greater quantity of mutton would be procured from a given quantity of acres, grazed by a larger number of small sheep, than from a smaller quantity of larger animals possessing less appetite.

Arthur Young, who is no mean authority, informs us that Mr. Bakewell was very curious in the breed of his sheep, and he considered both his rams and his ewes to be perfect specimens. He describes their appearance thus:—"Their bodies are as true barrels as could be seen—round, broad backs, and the legs not above six inches long; and a most unusual proof of kindly fattening is their feeling quite fat just within their fore-legs on the ribs—a point in which sheep are never examined in common, from common breeds never carrying any fat there. In his breed of sheep he proceeds exactly on the same principle as with oxen—the fattening in the valuable parts of the body, and the living on much poorer food than other sorts. He has found from various experience in many parts of the kingdom, as well as upon his own farm, that no land is too bad for a good breed of cattle, and particularly sheep. It may not be proper for large stock, that is, large-boned stock, but undoubtedly more proper for a valuable well-made sheep, than the usual wretched sorts found in most parts of England on poor soils, such as the moor sheep, the Welch ones, and the Norfolks; and he would hazard a moderate stake that his own breed, each sheep of which is worth several of those poor sorts, would do better on those poor soils than the stock generally found on them; a good and true shape having been found the strongest indication of hardiness."

According to Mr. Young, the breed of the sheep was originally Lincolnshire, which was wonderfully improved by Mr. Bakewell; and another person, who

* Mr. Bakewell had, at Dishley Farm, several carcases of the different breeds preserved whole in pickle, which distinctly shewed the thickness of the flesh and fat, and also the smallness of the offal. He had likewise skeletons, with distinct portions of the bones, heads, ribs, &c. of the animals.

* Probably the invariable custom of Mr. Bakewell not to engage his servants for a term of less than four years, might have contributed to prevent the secrets of his system being known. The well-used servant naturally becomes attached to his master, and the honest one will never betray the confidence that has been reposed in him.

visited Dishley in 1790, informs us that he was likely to make by his tups that season fully to the amount of 3,000 guineas. But notwithstanding the large amount of money that Mr. Bakewell was in the habit of receiving from the proceeds of his stock, at the very noontide of his fame he became involved in great pecuniary difficulties, which would not appear to have been brought on entirely by the expenses he bestowed on the necessary experiments for perfecting the improvements of his flock, but from the large number of visitors that congregated together at Dishley. Several of the principal of our nobility were frequently his guests, and Mr. Bakewell, whose disposition was as liberal as his mind was noble, entertained them in the same expensive style as they were accustomed to live in themselves when at home. This, of course, increased the expenses of his establishment enormously, and the host of Dishley Grange might truly have told some of his guests, as the Lady Rendlesham once remarked to the last Duke of York, when he took his leave, that Rendlesham House was considered to be the best inn on the road. It was also an unfavorable period for making money by the cultivation of land: the war with America had considerably reduced the value of produce, and the article of wool, which was of the utmost importance to him, was so greatly depreciated, that it was sold as low as nine shillings per ton. All other articles being also proportionably reduced, his expenses great, and his hospitality unlimited, it cannot be wondered at his finding himself in difficulties. But even then Bakewell kept up his high position, for when his stock was valued(the unexpired term of his lease being included in the valuation), there was a balance in his favor of from 1,500*l.* to 2,000*l.* From documents that may be considered of the highest authenticity—the valuations that were placed in the hands of his trustees at that time—we will make an extract to show the prices at which a portion of his sheep were estimated:—

26 Ewes and lambs, £81 18s.; 19 Ewes and lambs, £99 15s.; 6 Shear-hog rams, £42 10s.; 6 Ewes and lambs, £31 10s.; 26 Theavs, £109 4s.; 10 Shear-hog rams, £200; 10 Shear-hog rams, £260; 3 Rams, £50; 3 Rams, £300;

From the same document we find the sums that some of his long-horned beasts were valued at.

One red cow and cow-calf £35, one cow and bull-calf £50, one cow and cow-calf £40, one two-year-old bull £70, one red cow and calf £40, one cow and calf £60, one cow and calf £35, one cow and calf £30, one cow £30, one cow and cow-calf £30, one bull £20, four bulls £105, three cows £150, three cows £60*

As a practical farmer Mr. Bakewell attained great celebrity. He was in advance of the age, and we may say full half a century before any of his neighbors. It may be questioned if the land in Leicestershire is even now so well cultivated as Dishley farm was when its possessor died. He adopted the system of irrigation, and turned a small rivulet that flowed along a portion of his farm to such good account, that from it he contrived to water from 60 to 80 acres of meadow-land every season. He turned this little brook also to other useful purposes, making it to feed a mill, and save the trouble and expense of carting his turnips, which, being thrown into the stream, were allowed to float down with the current to the barn end, where their further progress was impeded by a grating at the bottom of a reservoir, from which they were taken out and laid up, clean and freight free, for the winter's supply. The idea was beautifully simple, and eminently useful, but Mr. Bakewell possessed a mind that was continually devoted to the improvement of rural affairs. He pursued the drill system of Tull, never sowing broadcast: both grain and turnips he always sowed by the drill, and kept the ground clean by the horse-hoe. There was a striking contrast also in his system of ploughing and that of his neighbors. Some of them employed from four to seven horses at the plough on a sandy loam soil, and then did not turn up much more than half an acre per day. Mr. Bakewell invariably confined himself to a pair, and stirred up an acre with ease, thus quadrupling the quantity of work done with an equal portion of strength. Dishley, in fact, was a school of practical agricultural reform, and it appears rather wonderful that the system was not generally adopted by the Leicestershire farmers. It is not now unusual in that county to see a string of four or five horses attached to the plough. For a long time the drill system also met with considerable opposition, but within some few years it has been looked upon in a more favorable light. Cultivators naturally look to the amount of profits that are likely to arise from the practice of any separate system; that of Mr. Bakewell did not place him among the wealthy, but had he been less liberal in his ideas, less given to hospitality, less visited by the patrician portion of the community, who entailed enormous expenses upon him, he must have lived and died a rich man, whether it was his desire to do so or not. It does not follow that a system must be erroneous because it does not at once open a mine of gold to fill the pockets of the inventor. Every system must have time to work, and every effort at improvement deserves, and ought to receive, the strictest attention. A practical agriculturist is of far more value to a nation than even a practical manufacturer, for the benefits the one confers upon the human race are lasting—the other but transient; yet both deserve to be honored by their country.

Dishley Grange was not exactly what a fashionable auctioneer would term "one of Nature's most favored spots," but under the care of Mr. Bakewell, it became more noted for its usefulness than its beauty. Clumps of willows were planted for ornament and shelter, which were carefully cut every seven years, and the wood thus supplied was brought into use to make handles for rakes, and other purposes of husbandry, manifestly causing a great saving of expense. Even the peelings of the willows were not thrown away, but by the direction of the master hand, were applied to make the bottoms of the sacks. Swampy as the grounds adjoining the house were, Mr. Bakewell contrived to make even their barrenness available

The gardens were cultivated rather for utility than for show; the fish ponds were always kept well stored, and even the drainings from the yard were conveyed to the brook, and thus, mixed with the water, used for the purpose of at once irrigating and manuring certain fields belonging to the farm.

It ought to have been remarked that the liberality and high-mindedness of Mr. Bakewell never evinced itself more fully than in his incessant application to the improvement of the Dishley estate. He was but a tenant, but he yearly increased the value of the land he rented for the benefit of the landlord. He stood forth as a model for all practical farmers to study; an example for all honest tenants to follow. He was indeed a man of rare merit, and it would perhaps be

* Old Comely, the parent mother of all the above stock of cattle, lived to the age of 26 years. When killed, the fat on her sirloin was four inches in thickness.

difficult to find his fellow. But, like almost all men who have benefited and enriched their country, and increased ten-fold the wisdom of posterity, by the most important discoveries in arts, sciences, and agriculture; Bakewell has been allowed to rest without even a monument to his memory. He devoted his energies to the good of the public; his own immediate interests he disregarded, without once thinking that future ages would have cause to pay the greatest veneration to his memory. He may be said to have been the first agricultural patriot, for the man who endeavours by incessant exertions to improve the animal creation, is fully as deserving of that distinctive appellation, as is the statesman whose exertions are employed for the perpetuation of the rights and privileges of his fellow countrymen.

We are proud of being able to pay this slight tribute of respect to the memory of a great and amiable man, who by his genius has created and scattered over the green hills, and verdant meadows of his native land, an animal whose beauty and usefulness will ever be a living monument to record his name. To him the English agriculturists owe an imperishable debt of gratitude, and we will conclude with a quotation from Arthur Young, who says, "Let me exhort the farmers of this kingdom to take Mr. Bakewell as a pattern in many points of great importance; they will find their account in it, and the kingdom in general be benefited not a little." The prices which some of the Ewes of the Dishley breed fetched, belonging to Mr. Paget. when sold by public auction on the 16th of November, 1793, were from 16 to 62 guineas each.—*Lon. Far. Mag.*

On the Comparative Merits of Oxen and Horses for Farm Work.—At the Gloucester, (England,) Farmers' Club, a member "stated the result of four years' experience, whereby he was convinced that, for field labor, with the exception of carting, oxen were superior to horses. He found that a team of four oxen could plow as much, and with as much ease, as three horses could; the cost of the former not exceeding 12*l.* per head, while the latter would cost 25*l.* per head. The cost of maintenance was decidedly in favor of the former, for while his horses cost him 7*s.* per head per week, his oxen did not cost him more than 4*s.* He usually began to work his steers when they were two years and a half old, and found them capable of plowing an acre a day throughout the year, if required; and setting aside the saving in the first outlay—maintenance, harness, and attendance—which was very considerable, the sale of the oxen produced on an average a profit of 4*l.* per head per annum. He therefore strongly recommended that on all arable farms requiring two or more teams, one-half should be oxen. By so doing, not only would a profit be received, but a much greater advantage would be conferred on the country by having to sell that stock, which, when fed, makes the best of all animal food—good beef—instead of supplying food for dogs, which is the case on most farms.

A Table of the Comparative Value of different kinds of Fodder for Cattle has been published by M. Antoine, in France, and is the result of experiments made by the principal agriculturists of the Continent, Thaer, Gemerhausen, Petró, Rieder, Weber, Krantz, André, Block, De Dombasle, Boussingault, Meyer, Plotow, Pohl, Smée, Crud, Schwertz, Pabst. It is unnecessary to give the figures which each of these experimentalists have set down, but the mean of their experiments being taken, there is more chance of the result being near the truth. Allowance must be made for the different qualities of the same food on different soils and different seasons. In very dry summers the same weight of any green food will be much more nourishing than in a dripping season. So likewise any fodder raised on a rich dry soil will be more nourishing than on a poor wet one. The standard of comparison is the best upland meadow-hay, cut as the flower expands, and properly made and stacked, without much heating; in short, hay of the best quality. With respect to hay, such is the difference in value, that if 100 lbs. of the best is used, it will require 120 lbs. of a second quality to keep the same stock as well, 140 lbs. of the third, and so on, till very coarse and hard hay, not well made, will only be of half the value, and not so fit for cows or store cattle, even when given in double the quantity. While good hay alone will fatten cattle, inferior hay will not do so without other food.

100	lbs.	of	Good hay is equal in nourishment to
102	"	"	Lattermath hay
90	"	"	hay-made Clover, when the blossom is completely developed.
88	"	"	Ditto, before the blossom expands.
98	"	"	Clover, 2d crop, is equal in nourishment to
98	"	"	Lucerne hay
89	"	"	Sainfoin hay
91	"	"	Tare hay
90	"	"	Spergula arvensis, dried
146	"	"	Clover hay, after the seed
410	"	"	Green clover
457	"	"	Vetches or tares, green
275	"	"	Green Indian corn
425	"	"	Green spergula
325	"	"	Stems and leaves Jerusalem artichoke
541	"	"	Cow-cabbage leaves
600	"	"	Beet-root leaves
300	"	"	Potatoe halm
374	"	"	Shelter wheat-straw
442	"	"	Rye straw
195	"	"	Oat straw
153	"	"	Peas halm
159	"	"	Vetch halm
140	"	"	Bean halm
195	"	"	Buckwheat straw
170	"	"	Dried stalks of Jerusalem artichokes
400	"	"	Dried stalks of Indian corn
250	"	"	Millet straw
201	"	"	Raw potatoes
175	"	"	Boiled do.
220	"	"	White Silesian beet
339	"	"	Mangold-wurzel
504	"	"	Turnips
276	"	"	Carrots
287	"	"	Cohlkalis
308	"	"	Swedish turnips
350	"	"	do. with the leaves on
54	"	"	Rye
45	"	"	Wheat
54	"	"	Barley
59	"	"	Oats
50	"	"	Vetches
45	"	"	Peas
45	"	"	Beans
64	"	"	Buckwheat
57	"	"	Indian corn
32	"	"	French beans, dried
47	"	"	Chestnuts
68	"	"	Acorns
50	"	"	Horse-chestnuts
62	"	"	Sun-flower seed
69	"	"	Linseed cake
105	"	"	Wheat bran
109	"	"	Rye bran

167 lbs. of Wheat, peas, and oat chaff
179 " " Rye and barley chaff
73 " " Dried lime-tree leaves
83 " " " oak leaves
67 " " " Canada poplar leaves

Lattermath hay is good for cows, not for horses. The second cut is generally considered as inferior in nourishment to the first. New hay is not wholesome. At Paris, when a load of 1000 kilos is bargained for, the seller must deliver—if between haymaking and October 1, 1300 kilos—from October 1 to April 1, 1100 kilos—and after April, only 1000. This is fair, and allows for loss of weight in drying. In London, a load of new hay is 20 cwt.; of old hay, only 18 cwt.

The dried halm of the Trifolium incarnatum, after the seed is ripe, is little better than straw. Clover, lucerne, and sainfoin are generally supposed to lose three-fourths of their weight in drying; but in general they lose more, especially in moist climates, where the sap is more diluted. When touched by the frost, they become very unwholesome, and should never be given to cattle except quite dry.

Straw is, on the whole, but poor food, and unless cattle have something better with it, they will not keep in any condition; when given with turnips or other roots, straw corrects their watery nature, and is very useful; cut into chaff it is very good for sheep when fed on turnips and oil-cake, and when newly thrashed is as good nearly as hay. By a judicious mixture of different kinds of food, a more economical mode of feeding may be substituted for a more expensive one, and the same result obtained. The value of straw depends much on the soil: a very clean crop will not give so nourishing straw as one containing many succulent weeds. Peas and vetch halm are superior to straw, especially when cut into chaff: it is by some thought equal to hay. The same may be said of bean halm not left too long in the field, and cut before it is completely dry. Buckwheat halm is of little value: it is thought unwholesome if given to sheep.

16 lbs. of raw, or, 14 lbs. of boiled potatoes will allow a diminution of 8 lbs. of hay.

Turnips will feed store pigs, but they will not fatten on them. Carrots and parsnips are excellent for horses, and, when boiled, will fatten hogs. Ruta-baga is liked by horses: it makes their coats fine, but must not be given in too great quantity, or it will gripe them.

Feeding.—A certain quantity of food is required to keep an animal alive and in health: this is called his necessary ration of food: if he has more, he will gain flesh, or give milk or wool.

An ox requires 2 per cent. of his live weight in hay per day; if he works, he requires 2½ per cent.: a milch cow, 3 per cent.: a fatting ox, 5 per cent. at first; 4½ per cent. when half fat; and only 4 per cent. when fat; or 4½ on the average. Sheep grown up take 3 1-3 per cent. of their weight in hay per day, to keep in store condition.

Growing animals require more food, and should never be stinted.—*Jour. Roy. Ag. Soc.*

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Fig. 1.

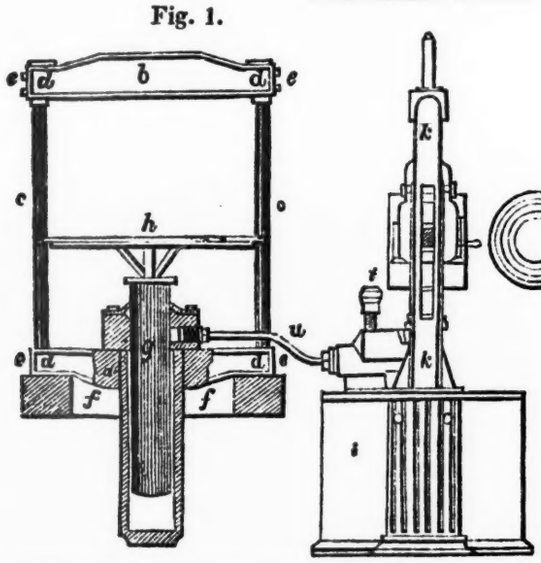
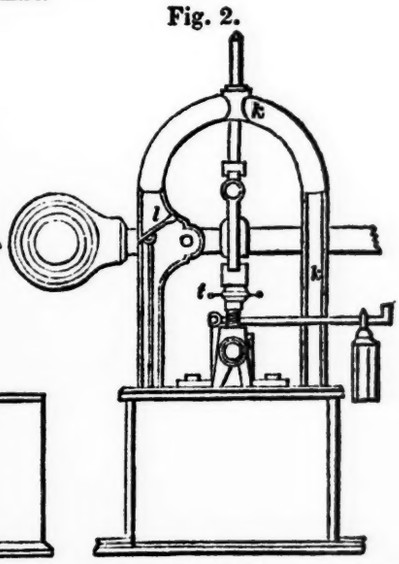


Fig. 2.



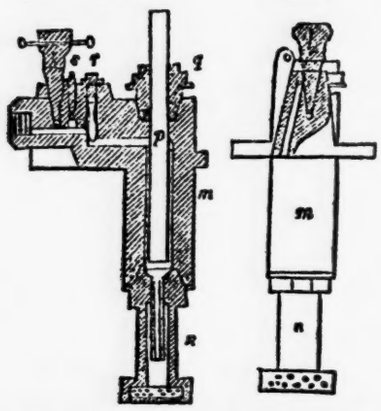
The framing consists of two stout cast iron plates, *a*, *b*, which are strengthened by projecting ribs, not seen in the section, fig. 1. The top or crown plate *b*, and the base plate *a*, *a*, are bound most firmly together by 4 cylinders of the best wrought iron, *c*, *c*, which pass up through holes near the ends of said plates, and are fast wedged in them. The flat pieces *e*, *e*, are screwed to the ends of the crown and base plates, so as to bind the columns laterally. *f*, is the hollow cylinder of the press, which, as well as the ram *g*, is made of cast iron. The upper part of the cavity of the cylinder is cast narrow, but is truly and smoothly rounded at the boring-mill, so as to fit pretty closely round a well-turned ram or piston; the under part of it is left somewhat wider in the casting. A stout cup of leather, perforated in the middle, is put upon the ram, and serves as a valve to render the neck of the cylinder perfectly water-tight, by filling up the space between it and the ram; and since the mouth of the cup is turned downwards, the greater the pressure of water upwards, the more forcibly are the edges of the leather valve pressed against the inside of the cylinder, and the tighter does the joint become. This was Bramah's beautiful invention.

Upon the top of the ram, the press-plate or table, strengthened with projecting ridges, rests, which is commonly called the follower, because it follows the ram closely in its descent. This plate has a half-round hole at each of its four corners, corresponding to the shape of the four iron columns along which it glides in its up-and-down motions of compression and relaxation.

k, *k*, figs. 1 and 2, is the framing of a force pump with a narrow barrel; *i* is well for containing water to supply the pump. To spare room in the engraving,

the pump is set close to the press, but it may be removed to any convenient distance by lengthening the water-pipe *u*, which connects the discharge of the force pump with the inside of the cylinder of the press. Fig. 3 is

Fig. 3. Fig. 4.



a section of the pump and its valves. The pump *m*, is of bronze; the suction-pipe *n*, has a conical valve with a long tail; the solid piston or plunger *p*, is smaller than the barrel in which it plays, and passes at its top through a stuffing-box *q*; *r* is the pressure-valve, *s* is the safety-valve, which, in fig. 2, is seen to be loaded with a weighted lever; *t* is the discharge-valve, for letting the water escape, from the cylinder beneath the ram, back into the well. See the winding passage in fig. 4. *u* is the tube which conveys the water from the pump into the press-cylinder. In fig. 2 two centres of motion for the pump-lever are shown. By shifting the bolt into the centre nearest the pump-rod, the mechanical advantage of the workman may be doubled. Two pumps are generally mounted in one frame for one hydraulic press; the larger to give a rapid motion to the ram at the beginning, when the resistance is small; the smaller to give a slower but more powerful impulsion when the resistance is much increased. A pressure of 500 tons may be obtained from a well-made hydraulic press with a ten inch ram, and a two and a one inch set of pumps.

We have been politely favored with the above cuts, from Ure's Dictionary, by Messrs. D. Appleton & Co., the Publishers of that valuable work.

REVIEW OF BOOKS.

(*Concluded from our last number.*)

Barnabe Googe, Esq.—Of *Sheep* there is not much to note. He cautions against the use of those whose tongue is black or "peckled," as producing black or pied lambs, which he takes from Virgil. The shepherd's care is well delineated. He is to drive the flock early to the field while the dew is abundant on the grass, and when the sultry heat of noon approaches, they are to be driven under some cold and watery rocks, and again at evening, plentifully refreshed with dew moistened herbage. For the fineness of their fleece, the most esteemed in our author's day, were those of England, Germany about the Rhine, and France. Spain, that probably then held the fine wooled merinos, is not mentioned, showing the limited intercourse that even then subsisted among enlightened nations. When the skin is cut in shearing, tar is recommended to be applied. Plenty of salt, change of pasture, and short, sweet feed was the best rule for them then, and it is the best now. When scabby, Constantine out of Dydimus, enjoins washing with urine, and then anointing with brimstone and oil; tar is a good remedy. For general disease of the flock, change of situation, as remote as possible, is best. Juniper berries with salt, and something added to relish, is urged to be given three or four times a year. "If lowzie or full of Tickles, they doo use to beat the roots of maple and seethe in water, then powre the licour on the skin of the back, so as to run all ouer the bodie. Others use the roote of the mandrake, not suffering the sheepe to taste thereof." Extracting the worm from the sheep's claws is given from Maister Fitzherbert. The dried flowers of wormwood, with salt, was administered as a sovereign remedy for all diseases.

A chapter on *Goats*, as dairy stock, is in some measure superseded in modern times, by short horns, and we must omit the curious details respecting these *cattell*. The merits of the different varieties of cheese, in our author's day, was after in the following order: "The Parmasines, from the river Po, Holland, Normandy, English. Of this last, the order was Cheshire, Shropshire, Banbury, Suffolk, Essex; and the *very worst*, the Kentish." It is recommended keeping them in grain, as many now do. If to the rennet, the juice of birch be added, all skippers are avoided.

Swine.—From the first invasion of the Saxons upon the sea-girt isle, swines flesh, through all the successive days of Arthur, Alfred, Cedric and Gurth, to the present time, has been a prominent object of attention, and ten pages of truth and error, good sense and no sense, attests our author's devotion to the theme. Virgil's Italian sow, with thirty white pigs around her dugs, requires no greater stretch of credulity, than many of the statements here. The shape given is "long, large sided and bellied, wide buttocked, short legged and footed, big necked and well brawned, short groyned,* and turning upward, his tayle *wrinkled*, and very prolific." He affords *fifty dayntie dishes*. Varro is still ahead of our most ambitious western breeders; "a present of two ribs being sent to a Roman Senator, *one foot and three inches* between the skin and bone."

Dogs and doggeries, with a list of classical names, for them and the breeding of cats, close the third book.

A long chapter on poultry and eggs, and making of capons, contain many good suggestions, and as many crudities. Geese in his day, were very liable to have their necks broken, "with pulling at the tough and stubborn weeds, by reason of the sudden starting back of the weed." The Patie de gras foi of the French, seems to be an old dish, "as the Jews used to fat their geese by wrapping them up in a linen apron, and hanging them up in a dark place, and stopping their ears with peason, then by crowding their stomach with ground malt or barley steeped in water, with gravel and water, they got so fat their livers weighed 5 lbs. Whilst I was at the Council of Worms, there was a liver of a goose brought me by a Jew that weighed 4 lbs.

When Ambassador to England, I was told by men of good credit, there was in Scotland, near the sea, certayne trees that yearly brought forth fruit, which falling into the sea, became a kind of wild duck, or rather barnacles. Aristotle witnesseth the like, affirming there is a tree in Scythia, with leaves larger than the maple, whereof cometh a kind of four footed birds." For much curious poultry lore, reference must be had to the book itself. Turkeys are herein alleged to have been introduced into England a little preceding 1530. The receipt for pigeon fatting, is breaking their legs, that they may not move far, which is akin to fatting geese, after *nailing* their feet, still practiced in England, and whipping them to death, sometimes done in Europe now, to increase the tenderness of their flesh.

Fish ponds, as they were a great item in the provision of the ancients, and are still among the wealthy

* Groin, snout—from the French.

and luxuriant moderns, so were they during the middle ages, and all the varieties and modes of treatment are here described.

Bees, that magic sound, that has awakened the cupidity of the parsimonious, the appetite of the gluttonous, the song of the poet, the sentiment of the moralist, and the grave deductions of the lawgiver, statesman, and political economist, from time immemorial, seems to excite all our author's zeal, and for forty pages he discourses on their then mysterious and undiscovered habits, their laws, good government, industry and exemplary habits. All the poetry and prose that can be mustered, is invoked to do them justice. The queen was then universally designated as the king. Their fidelity to him is shadowed forth in the quaint old nasal psalmody translation of that day, from Virgil.

"On him they cast their eyes and gard him day and night,
And oft they beare him on their backes, in his defence they fight,
But if he chance to dye, then all is dasht and donne,
Their coams asunder downe they teare, and all to ruin runne."

Their preparation for repose after the weary toils of the day, is thus cosily depicted:

"They trimme theyr wings, and set theyr legs in frame,
Till every one himself, hath throughly drest,
Then synging at theyr doores awhyle they game,
Till one giues warnyng for to goe to bedde,
Then downe they lay to rest theyr sleepie head."

To prevent capsizing in a gale, the ancient bees were accustomed to carry small stones in their feet "as Botes in balast be." The *drone*, the *gentleman* of the commonwealth, was appropriately enough, styled the *theefe*. "He feedes like a lubber of the sweate of his fellows, yet serveth he for breeding and bringing up of the young bees, and when done, he is thrust out of the hive.

For such ambitious bee princes, as are forever leading their otherwise staid, and well-to-do-in-the-world-people abroad on fools errands, wasting their own time and interfering with other people's, he recommends depriving of their wings, "that so this too busie-headed leader being depriued of his sailes, will keepe at home in spite of his teeth." The receipts for breeding bees will be convenient for such as have a deficiency; and which, strange as it may seem, we recollect to have heard detailed in our boyish days, in some of the remote villages of New England, with all the gravity of established and incontrovertible axioms, by the descendants of those ancient pilgrims, who possibly might have been some of the descendants of Barnabe himself:

"Of steere that strangled is, are children strangely bred,
Of horse engendered is the Waspe, and Bees of Bullock ded.

For a young oxe or steere, being strangled, corrupted and cast into some such place, where the putrified vapor cannot breath out, and store of herbs, and flowers agreeing with the nature of the bees, thrust into the body, as thyme, cassia, and such like, wherewith the vapor may be tempered, you shall quickly hereof have bees, as you may of the horse, waspes and hornets—as Virgil sayeth:

The chaynes unchaste of Venus they detest;
To fyle themselves with fylthe lecherie
They judge unmete, nor wyl be so increast,
But from the plants and pleasant flowers sweete,
They fetche their tender broode.

Another fashion is, to frame a little house four square, with a window on every side tenne cubits square and high. A young fatte steere being brought hither, and his nose and ears, and all other open vents being stopped with linnen dipt in pitch, must be beaten with numbers of clubs to death, so as both the bones and flesh may be broken without any blood: for of the blood cometh the bee. Afterward the house being deep strawed with thyme, and the Bullocke being laide uppon his backe, doores and windowes must be close shut up and so plaistered that no ayre can enter. Three weeks after the windowes must be opened on eury side, saue where the wind bloweth strongest, and the ayre let in; when it hath been wel cooled and refreshed the windowes must be shut up againe, and being opened the 11th day afterward you shall find a housefull of bees, and nothing left of the oxe, save the hornes, the heare and the bones; the kings being engendered of the braine and the other bees of the body.

Pvllarivs.—I like not so costly comming by bees.

Melisseus.—Of the same opinion is Columella: I tell you but the order of the old skilful fellowes, you may choose whether you will try it." And here we must take leave of the illustrious Conradus Heresbacheus, Counsellor of mighty Princes, and ambassador to illustrious courts; and his scarcely less distinguished elucidator and commentator, Barnabe Googe, Esquire.

System of Farming *practised by the late Lord Leicester.*—The last No. of the Royal Agrl. Journal of England received, is unusually rich in original papers of great interest to the farmer. Some extracts will be noticed in our present No., and the want of room only prevents our increasing them. The items which follow are some of the subjects treated in it.

The first article is an excellent one from Earl Spencer, on the improvement of the estate of the late Lord Leicester. This was accomplished in a few years, by the adoption of an improved mode of cropping, and the application of *marl*, dug beneath the light sandy surface, that everywhere abounded on the estate. The simultaneous introduction of the best variety of cattle, sheep, and swine, enabled him to carry out and perfect the improvements of the soil, and his practice became a model for the imitation, not only of his own country, but in other parts of the world. Close observation, and a careful investigation of the merits of rival breeds, was his only criterion, and when *his own experiment*, long and accurately tried, convinced him of an error in his operations, he was ready at once to reject them, and substitute such as were grounded on the fullest experience.

In stock he commenced with the Bakewell Long Horns, but gradually allowed the Devons to usurp their place, till 1812, since which, they have been the only cattle he has bred, they being admirably adapted to the light soil of Holkham. In sheep, he first commenced with the Norfolk, but subsequently adopted the South Downs entirely. Into this breed, of late years, he has infused a dash of the Hampshire Down, by which, he conceived he got more constitution, a greater value in wool, and a larger proportion of lean meat in the carcass. He was also in the habit recently, of using a long wooled ram on his pure South Down ewes, by which he got an excellent and profitable sheep for the market. His pigs were made up of various crosses, after a fair trial of their respective merits. The improvement ran through all his operations, manures, tillage and crops, and resulted in reclaiming one of the poorest estates in England, and converting it into one of the best, and with this important addition, that it was constantly and abundantly repaying all the improvements by its annual return of crops.

Trench Plow.—There is an excellent model of the Great, or Jersey, Trench plow, by that veteran agriculturist, Col. Le Couteur, and the detail of its use in the last number of the Journal. After a few inches of the top soil has been thrown off by an ordinary plow, it is drawn along by a powerful team of four to eight horses, in the same furrow, turning up the land from 10 to 18 inches more, all of which is made into a good soil. By this means immense crops of roots, grain and grass are raised. This single plowing is a substitute for the numerous shallow plowings practiced in other parts of England, and the deep and expensive spading, practised in proper garden tillage every where. But as few of our countrymen are as yet prepared to encounter this thorough system of husbandry, we forbear to enlarge upon it. We will add, however, that where this system is practiced, land has got to be worth from $500 to $750 per acre, for cultivation.

On Cottage Economy and Cookery.—It seems, from a long report to be found in this journal, the premium for which was awarded to a lady, that the leading, most intelligent, extensive, and useful Agricultural Society in the world, does not think it beneath them to publish, with all the minutest items, 18 pages of receipts and managements in cooking cheap, substantial, and wholesome dishes for the laboring classes. Though we consider this a peculiarly appropriate topic for that longitude, we should deem it also fully worthy of this, did our space allow us to give them, so modified as to be entirely adapted to our situation. It will have been noticed by our readers, that we have occasionally appropriated a corner to these matters, from our own consideration of their intrinsic merits.

League of Industry, *devoted to Home Manufactures, Agriculture and Commerce.*—The above is the title of a neat, semi-monthly sheet, of 8 pages, published at Richmond, Va., by Moses Goold. We hail the establishment of the above paper at the capitol of the Old Dominion, as one of the best signs of the times. The paper sent us is well filled with original matter, sound, sensible and to the point; all bearing on the subject of fostering *domestic* industry, instead of sending our money to foreign countries, for such articles as we can abundantly supply at home. The disturbing subject of *politics* has no place there. *The true interests of the entire citizens of the Union is the theme*, and to this we hope it will rigidly adhere. If this work is sustained, it will accelerate the highly beneficial change of opinion on these important topics in the south, which has been going on for some years past.

The interesting biography of Bakewell, was in type for our last No. but not having room then, it appears in this. It is probable that *Bakewell possessed more genius as a breeder than any other of the human race*; certainly far, very far, was his success in advance of any other individual, whose name history has handed down to us. The sketch we give, will be read with interest by every intelligent breeder.

Thorough under Draining.—We had marked for publication, from the Lon. Far. Mag., the best article we have yet seen on under draining, by Mr. Smith, of Deanston, but as we have not yet had space for its publication, and know not when we shall, and the system thus far, has been so little practised in this country, we conclude to deny ourselves the pleasure of laying it before our readers for the present.

EDITOR'S TABLE.

(Omitted in our last number.)

The Treaty and the Tariff.—We cannot permit our paper to go to press, without congratulating our readers on the successful negotiation of a treaty with Great Britain, and the enactmect of an efficient protective tariff. The first, gives us a present, and the hope of a permanent peace, with the only nation in the world that can do us material injury; the last, will afford us, so long as we have wisdom to adhere to it, a reasonable condition of prosperity, throughout every portion of our country. The first, secures us from foreign violence and aggression; the last, from foreign management and fraud. The first, protects the peaceful fireside of every citizen of the union; the last, yields to industry and frugality, an abundance of all the comforts of life. The first, will prevent a vast national injury; the last, in the aggregate, an equal or greater amount of individual loss.

But after the consummation of the treaty, there is nothing we so much admire, as the straight forward, honest, manly sense, exhibited by the two distinguished agents in the negotiation. They evidently entered upon their arduous duty with the good faith, direct purpose, fair and open dealing, that characterises honest men in their private transactions, and *has not* characterised most of the national bargains, that have been concluded within the last few centuries. A different system of policy has been taught by the diplomatists of the middle and later ages; a system of fraud and treachery, of chicanery and deception, where each party cautiously lay in ambush, till some carelessness on the part of his adversary, or some successful manœuvre of his own, afforded an advantage which the wily negotiator secured at a single bound. The whole host of feline statesmen, from Machiavel, Talleyrand, and Metternich, the royal tigers of the race, down to the pettiest grimalkins that prowl around a bird's nest, or rat warren, have, by these illustrious statesmen, been rebuked and instructed, for all time to come. They had a great and noble purpose to achieve, which they at once accomplished, by mutual, though trifling concessions; while they secured important and lasting advantages to each of the great nations they represented. The honest intentions of Great Britain were amply guaranteed, by sending to us a representative, strong, and justly too, in the confidence of his own government, but whose character, developed through a long and successful life, rendered him every way acceptable to our own. In announcing Lord Ashburton's appointment as the plenipotentiary to this country, we had the assurance, that while England would lose nothing she had a fair right to claim, there would be no attempt to secure petty advantages, to which she had no title; and the appointment of America's great statesman by us, was an evidence of an equal disposition on our part, to conclude a treaty on the broadest principles of a just and enlightened policy. *Let it be perpetual.*

The tariff recently passed, though not free from objections in its details, yet as a whole, is worthy the approbation of every American, who desires to see his fellow citizens protected against the frauds of aliens, and the pauper labor of other lands. We have had a pretty thorough trial of the principles, and practical working of *free trade* for the last eight years, and the result may be stated in a few words.

From 1833 to 1840 inclusive, a period of eight years, we have imported in round numbers, to the amount of $1,102,000,000, at an average duty of about 20 per cent; and during the same time we have exported

$925,000,000, paying in the countries to which exported, an average duty of over 90 per cent; making a balance of $177,000,000. A part of this balance, however, does not exist against us, having accrued in the shape of charges and profits in the carrying trade of our vessels. A sufficient amount however remains to show us the beautiful operation of the free trade system, when our Legislators are unwise enough to take off the commercial restraints that should ever be interposed to individual cupidity when dealing with nations that so rigidly, and we may add, wisely, protect their own interest.

By this experiment, we have reduced ourselves from the most prosperous condition any nation ever enjoyed on the face of the earth, to a state of general ruin and bankruptcy—bankruptcy of the federal government, state governments, banks, corporations, and individuals. Nearly $200,000,000 are still due by us abroad, while figures can hardly be arranged to give an intelligible estimate of the aggregate indebtedness at home. We came out of the eight years war of the revolution with the most powerful nation on the globe with a debt of $50,000,000; we come out of an eight years experiment of comparative free trade with a debt more than *three times* as great. Surely the bitterest enmity of open foes is tender mercy, in comparison with the cruelty of insidious friends.

We exhibit at the present moment something such a spectacle as one of the ancient mastadons, whose bones fill up our western salt licks, as the skeletons of ancient and once powerful, but simple minded nations, now dimly fill up the pages of history; one that was lucky enough to escape a voluntary immersion in a Kentucky quagmire, we mean. After floundering and struggling, and perhaps dislocating a few limbs, and almost exhausting his more than leviathan strength, he has succeeded in reaching terra-firma, and there he lies, all drabbled with mud, and reeking with slime. All the beasts of the forest could not have compelled him to his degraded condition, yet the veriest jackal of the woods can now insult him with impunity. Or, we may take Samson for our exemplar; wearied out by the solicitations of our free trade Delilahs, we have at last yielded our better judgment to their vexatious teazing, and like him, we have paid the just forfeit of our folly by grinding in the prison house of the Philistines. It is lucky for us that unlike the captive Hebrew, we have not had our eyes bored out in our humiliation. We have only been hood-winked, and as our increasing locks are already renewing our vigor, we may confidently expect that an acuter vision will direct our returning strength to an effectual self protection in future.

Lard Lamps.—A friend has politely sent us one of the improved lard lamps, with the following statement. He bought 1 1-2 lbs. lard, at 8 cents per lb. and one pint of sperm oil, for 12 1-2 cents, which he placed in separate lamps, and commenced burning; each being so regulated as to afford, as near as the eye could determine, precisely the same quantity of light. The result was, *one half of the lard exhausted all the oil:* or the same light is furnished from lard at one half the cost of oil at the above prices. But in the interior lard is frequently bought for half the above price, and oil for 50 per cent. more; the difference then is as 3 to 18 in favor of lard, or a saving of *five-sixths* the cost of the oil.

The lard, free from salt, is put in cold, and a small quantity applied around the tubes, which settles into the small cup on the top and supplies fuel for the light till it is sufficiently melted within the lamp to afford a supply. For sale by E. Filley, 125 Maiden-Lane.

☞ We shall be obliged by the Editors of the Southern Planter, at Richmond, sending us the report of the Farm Committee of Henrico of 1841, which they esteem as a "model of that kind of writing." We have no recollection of ever seeing it, and would much like a perusal. We still incline, however, to our own suggestion of "mounting the rostrum," as the owners of animals could then be heard in explanation and defence, which we consider very important; and such a viva voce discussion, carried on with courtesy, and within a limited time, could not fail of being very exciting and instructive. We should not object to a condensed and clearly defined after-written report, to be published among the transactions of the society, so that our friends will see that we quite agree on this subject.

☞ Subscribers who have not yet paid for the current volume of this paper, are reminded that this No. completes *two-thirds* of the year. Our terms are, *payment strictly in advance*, and any deviation from this rule, has been made for a temporary accommodation only. *Collecting* one dollar per ann. from subscribers, when they are scattered from Maine to Louisiana, is of course out of the question. Debts due us, therefore, for the work, are strictly debts of honor. We trust to this character of our claims alone, for their immediate transmission to this office. Such as do not receive their numbers hereafter, must assign this as the cause of withholding them.

We expect those gentlemen who have voluntarily, or by request, acted as agents, will in all cases indemnify themselves for their trouble, by reserving the commission allowed.

REVIEW OF THE MARKET.

Prices Current in New-York, October 29, 1842.

ASHES, Pots, per 100 lb.	$5 50	to	5 62
Pearls, do.	5 87½	..	—
BEESWAX, Yellow, per lb.	29	..	29½
COTTON, Louisiana, do.	6	..	10½
Upland, do.	5¾	..	9
Florida, do.	6	..	9
Alabama, do.	6	..	10
FEATHERS, American, live, per lb.	25	..	34
FLAX, American, per lb.	8	..	8½
FLOUR, Northern and Western, via Erie Canal, per bbl.	4 19	..	4 25
do. via N. Orleans,	4 12½	..	4 19
Southern, per bbl.	4 50	..	4 87½
RYE, per bbl.	3 12½	..	3 37½
MEAL, Corn, per bbl.	2 75	..	3 00
do. per hhd.	13 50	..	14 00
WHEAT, Western, per bushel,	83	..	88
Southern, do.	70	..	80
RYE, Northern, per bushel,	60	..	61
CORN, do. do.	54	..	57
Southern, do.	49	..	53
BARLEY, per bushel,	46	..	48
OATS, Northern, per bushel,	24	..	27
Southern, do.	18	..	20
PEAS, Field, do.	—	..	—
BEANS, White, per bushel,	—	..	—
CLOVER SEED, per lb.	7	..	7¼
TIMOTHY SEED, per tierce of 7 bu.	11 50	..	12 00
FLAX SEED, rough, do. do.	10 00	..	10 50
clean, do. do.	—	..	— 00
RICE, per 100 lb.	2 44	..	3 25
HEMP, Russia, per ton,	210 00	..	215 00
American, do.	2 80	..	—
HOPS, first sort, per lb.	11	..	14
LEAD, Pig, per lb.	3¾	..	3¾
Sheet and Bar, per lb.	4½	..	5
OIL, Linseed, American, per gal.	90	..	96
PLASTER OF PARIS, first quality, per ton,	2 25	..	2 75
unground do.	1 87½	..	2 00
BEEF Mess, per bbl.	7 25	..	7 50
Prime, do.	2 75	..	3 50
Cargo, do.	2 50	..	2 75
PORK, Mess, do.	7 50	..	9 50
Prime, do.	5 00	..	6 50
LARD, per lb.	7	..	8
BUTTER, best Table, per lb.	16	..	18
Western, good, per lb.	12	..	14
Shipping, do.	6	..	7
CHEESE, in boxes and casks, per lb.	5½	..	6½
HAMS, Smoked, per lb.	6½	..	8
Pickled, do.	—	..	—
Shoulders, smoked	—	..	—
BEEF, Smoked, do.	6	..	7½
SALT, Liverpool, ground, sack	—	..	1 47
do. fine, do.	1 62½	..	1 72½
SUGAR, New Orleans, per lb.	5	..	6
TOBACCO, Virginia, do.	3	..	6
Kentucky, do.	3	..	7
TALLOW, American, do.	8	..	8¼
WOOL, American Saxony fleece, per lb.	32	..	35
Full blood Merino do. do.	28	..	30
Half to three-fourths do. do.	24	..	26
Native to half do. do.	18	..	20
SHEEP PELTS, each,	—	..	—
HAY, per 100lb.	56	..	62½
POTATOES, new, per bushel,	25	..	—
EGGS, per 100,	1 00		—

REMARKS.—The market remains at its former rates, nearly; a slight reduction in the prices of flour and grain, being the principal ones we notice. American water rotted hemp will at present command from our navy, by the judicious protective policy they have adopted towards this article, $280 per ton, which is a sufficiently liberal encouragement, it is presumed, to insure a full supply hereafter.

An agent from a commercial house in Liverpool has travelled extensively through various sections of our country this season, and by circulars, has distributed extensively the modes of putting up provisions for the English market. The experiment is worth the trial whether we can export these articles to a profit, and we trust it will be thoroughly tested. Lard should be put up in large tight barrels, and if it arrives in *prime order*, it will there be opened and re-packed in bladders, after the Irish mode, or in small neat kegs, and offered as English lard, and sold at a fair price. Directions for packing beef and pork, can be found in most of the Western papers, copied from the above circular. *Good* butter pays a duty of 5 cents per lb.; its exportation, therefore at any fair profit is out of the question. By reducing the quality to shipping butter, in which condition a large portion of it is now brought to this market from the west, it pays the shipper here handsomely at our quoted rates, 6 to 7 cts. being sold abroad as *grease*.

NEW-YORK CATTLE MARKET, Oct. 24, 1242.—At market 1350 head of fresh Cattle, (400 from Pennsylvania,) 3000 Sheep and Lambs, and 20 Cows and Calves.

PRICES—Beef Cattle have been dull of sale, and we put our figures at $5,50 for prime cattle, fair to ordinary sold as low as $3,50. At which prices several lots were taken for barrelling. Unsold 300. Cows and Calves—All at market taken at $20 a $35. Sheep and Lambs—2800 taken at from $1,50 to $2 for Sheep, and $1 to $2,25 for Lambs.

Contents of this Number.—Editorial.

V. L. DILL, Stereotyper, S. W. BENEDICT, Printer.